



Annual Groundwater and Drinking Water Program Review



Calendar Year 2017

Illinois Environmental Protection Agency

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Program Review
Calendar Year 2017**

June 2018

**Illinois Environmental Protection Agency
Bureau of Water
Division of Public Water Supplies**

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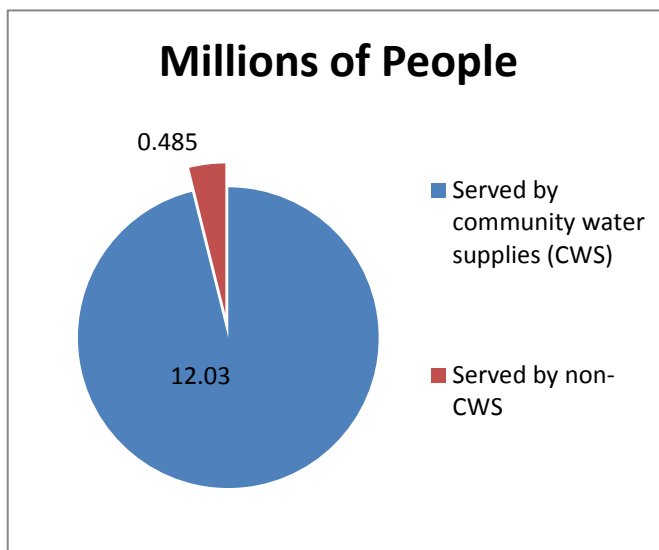
Acronyms and Abbreviations

Act	Illinois Environmental Protection Act
BOW	Bureau of Water
CAS	Compliance Assurance Section
CCA	Compliance Commitment Agreement
CCCDI	Cross-Connection Control Device Inspector
CWS	Community Water Supply
DPH	Department of Public Health
DPWS	Division of Public Water Supplies
EDG	Enforcement Decision Group
EPA	Environmental Protection Agency
FOS	Field Operations Section
GAC	Groundwater Advisory Council
GWS	Groundwater Section
HAB	Harmful Algal Bloom
ICCG	Interagency Coordinating Committee on Groundwater
IFAS	Infrastructure and Financial Assistance Section
IGPA	Illinois Groundwater Protection Act
ILCS	Illinois Compiled Statutes
Ill. Adm. Code	Illinois Administrative Code
IPCB	Illinois Pollution Control Board
JCAR	Joint Committee on Administrative Rules
LHD	Local Health Department
MCL	Maximum Contaminant Level
M&R	Monitoring and Reporting
MRDL	Maximum Residual Disinfectant Levels
NCA	Non-Compliance Advisory
NCPWS	Non-Community Public Water Supply
NTNC	Non-Transient, Non-Community
PS	Permit Section
PWS	Public Water Supply or System
PWSS	Public Water System Supervision
RO	Regional Office
RTC	Returned to Compliance
RTCR	Revised Total Coliform Rule
SDWA	Safe Drinking Water Act
SDWIS	Safe Drinking Water Information System
TNC	Transient Non-Community
VN	Violation Notice

EXECUTIVE SUMMARY

This report provides information on the efficacy of existing programs to protect and support public water purveyors and groundwater resources in Illinois. This document is intended to identify program stresses and future directions in overcoming existing insufficiencies. Further this report attempts to provide information on anticipated future shortfalls in the regulatory oversight and technical assistance to drinking water systems in Illinois. Finally, this is intended to meet the reporting requirements of the Safe Drinking Water Act Amendments of 1996 and the Illinois Groundwater Protection Act.

The Illinois Environmental Protection Agency (EPA) regulates 1,749 community water supplies (e.g., municipalities, privately owned utilities, etc.) that serve 12,032,670 individuals. The Illinois Department of Public Health (DPH) regulates 3,768 non-community water supplies (e.g., schools, factories, campgrounds, rest areas, etc.) that serve approximately 485,082 customers. The mission of these two state agencies is to assure that all persons served by public water supplies receive water that is safe and adequate in quantity.



The Illinois EPA, Illinois DPH, and U.S.

EPA recognize the importance of an ongoing program to evaluate the sanitary conditions of all public water supplies in Illinois. For the 2015-2017 calendar year timeframe, the Illinois EPA conducted sanitary surveys at approximately 76.9 percent of the community water supplies and the Illinois DPH conducted sanitary surveys at approximately 95.5 percent of the non-community water supplies in the state. Similarly, the Agencies understand the importance of an ongoing program to protect ground and surface water sources of public water supplies. In calendar year 2017, 73 percent of the population served by community water systems in Illinois had source water that was substantially protected by their respective water systems, exceeding the U.S. EPA established measure for source water protection programs.

The Governor and General Assembly further understand the importance of well credentialed and properly certified public water supply operators in protecting water consumers. For Calendar Year 2017, there were 3,737 certified community water supply operators (not including 249 operators in training) and 578 certified non-transient non-community water supply (day care centers, schools and factories) operators in Illinois. Expansion of the State's technical capacity (such as the operator in training certification process and revisions to the Public Water Supply Operations Act) remains one of the hallmarks of the drinking water protection program. Further, the Illinois EPA and DPH continue to support the development of financial, managerial capacity in water systems. We continue to look for opportunities to enhance these important elements in the stability of water supplies. Such initiatives as the capacity development technical assistance

contractual agreement will be given priority to ensure the continued viability of our water systems. Recognizing the *mission* of the Illinois EPA and DPH, for calendar year 2017, 99 percent of the population served by public water supplies in Illinois received drinking water that met all applicable health-based drinking water standards.

Core Public Water Supply Supervision (PWSS) Program Grant Activities

In 2017, the Illinois EPA and DPH agreed to:

- Provide an adequate laboratory certification program for all regulated contaminants. At a minimum, Illinois should have an adequate certification program to certify commercial labs within the state. (Note: This commitment does not require that the Illinois EPA and DPH laboratories expand capacity to do all analysis required under the SDWA primary enforcement programs.) Specifically:
 - Illinois EPA will continue to provide a certification program for inorganic and organic contaminants of concern.
 - Illinois DPH will continue to provide a certification program for bacteriologic contaminants of concern.
 - A third party will continue to accredit the single laboratory in Illinois that conducts radiological analyses for drinking water.
- Maintain a data management system that tracks requirements for all rules. The Illinois EPA and DPH should have the appropriate combination of hardware, software and personnel to accurately and within a reasonable timeframe identify the inventories (including routine updates of system information), maintain water quality monitoring information, and track compliance with all monitoring and reporting (M&R), maximum contaminant level (MCL), maximum residual disinfectant level (MRDL), treatment technique (TT), public notice (PN) and public information requirements. Specifically:
 - Illinois EPA will continue to utilize the Safe Drinking Water Information System (SDWIS)/STATE to manage community water system compliance with all regulatory concerns.
 - Illinois DPH will continue to utilize a second instance of SDWIS/STATE to maintain compliance data for regulatory concerns related to federal regulatory requirements for non-community water systems.
- Keep adequate records of pertinent state decisions. Specifically:
 - The Illinois EPA promulgates regulations through the Illinois Pollution Control Board (IPCB) and Joint Committee on Administrative Rules (JCAR). All regulatory decisions are tracked and made part of the public record by these two quasi regulatory/judiciary bodies. All enforcement decisions made by the Illinois EPA are part of the public record and available through Freedom of Information Act request or through the Illinois EPA website (including Illinois EPA's Drinking Water Watch).
 - The Illinois DPH promulgates regulations through JCAR. All regulatory decisions are tracked and made part of the public record. All enforcement decisions made by the Illinois DPH are part of the public record and available through Freedom of

Federal funds provided by the PWSS program currently provide less than 50 percent of the funds used to support the drinking water protection program in Illinois. The remainder of staff resources are provided for by state programs.

Information Act request or through the Illinois DPH website (including Illinois DPH's Drinking Water Watch).

- Adopt all rules in a timely manner (within two-year extension period). Specifically:
 - The IPCB normally adopt identical in substance to Federal Rules twice per year. The Illinois EPA and DPH currently have statutory (enforceable authority) for all Federal Rules.
- Notify all systems of regulatory requirements and respond to questions. Specifically:
 - The Illinois EPA and DPH will continue to provide technical assistance, emergency response and routine sanitary surveys (inspections) for water systems in Illinois. In addition, the two state agencies provide speaker support to a multitude of state and local organizations. These include, but are not limited to: Illinois Section of the American Water Works; Illinois Rural Water Association; Illinois Potable Water Supply Operator's Association; Illinois Association of Plumbing and Heat/Cooling Contractors; and Regional Water Supply Operator Organizations.
- Determine violations for all rules and report to U.S. EPA.¹ Specifically:
 - The Illinois EPA and DPH will continue to report these data in Extensible Markup Language (XML) format and utilize the Central Data Exchange (CDX) as the media for data transfer to U.S. EPA.
- Maintain an adequate enforcement and compliance assistance program (adequacy determined by a decrease in violation frequency). Specifically:
 - The Illinois DPH and EPA will continue to strive to maintain a favorable water supply compliance history through active technical assistance programs throughout the state.
- Maintain a baseline core of individuals with the technical expertise needed, to perform sanitary surveys, permit (plan and specification) reviews, and respond to emergencies. Specifically:
 - Illinois EPA and DPH recognize that staff resources are key components in the sustainability and ultimate viability of the drinking water protection program in Illinois. Both Agencies' will continue to work to maintain and enhance the technical expertise necessary to administer the public water supplies drinking water program.
- Conduct a joint evaluation of program performance with U.S. EPA to improve Illinois' ability to understand, measure, assess, and communicate progress in drinking water programs. Specifically:
 - Illinois EPA and DPH will evaluate the findings of a data and enforcement verification audit conducted by U.S. EPA Region 5 in Calendar Year 2017.

While most data are reported within statutory timeframes, the Illinois EPA and DPH recognize that timely reporting is as an area that can be improved upon.

¹ C.F.R. 140.15. These data must be reported in XML format and utilize the Central Data Exchange (CDX) as the media for data transfer to U.S. EPA. The reporting schedule requirement for States to report data to the national data base, SDWIS/FED-ODS, is as follows: FFYQ1 – February 15, FFYQ2 – May 15, FFYQ3 – August 15, and FFYQ4 – November 15. Because States submit their data directly to SDWIS/FED-ODS, U.S. EPA Region 5 allows the States to submit data 60 days after the end of the quarter. If the data is not reported within 60 days, the Region will raise the issue to the State Director's attention. The reporting schedule expectation is for States to report data to SDWIS/FED-ODS as follows: FFYQ1 – February 28, FFYQ2 – May 31, FFYQ3 – August 31, and FFYQ4 – November 30.

Further, the Illinois EPA and DPH will continue to be responsive to enforcement tracking inquiries and other program concerns from the U.S. EPA. The U.S. EPA will continue to coordinate with the Illinois DPH and EPA on consumer complaint assessment and resolution.

- Develop and implement a plan to provide adequate funding to carry out all functions of the PWSS program.

- Illinois EPA and DPH will continue to ensure that drinking water meets all applicable standards through effective treatment and source water protection.
- IPCB will continue to adopt state regulations that are identical in

substance to federal regulations to assure the continual improvement in health protection is based upon the most current science available at the national level.

Illinois EPA and DPH recognize providing safe drinking water to Illinois citizens is a critical function in the mission of protecting public health and the environment. Therefore, Illinois has not disinvested in Federal or State rules/regulations that serve this purpose.

Priorities for 2018

The following activities outline the priorities for the Illinois EPA and DPH for Calendar Year 2018:

- Finalize the streamlining of IPCB drinking water regulations to enhance drinking water protection in Illinois.
- Continue to support statutorily established committees, councils and boards charged with assisting the Illinois EPA and DPH in improving program activities in support of the Agencies' mission.
- Continue to use, support and improve technology, such as SDWIS/STATE, to track the efficacy of water treatment facilities in protecting water consumers.
- Continue to initiate efforts to enhance the technical, financial and managerial capacity of public water supplies. This priority includes ensuring that the Permitting, Operator Certification, Cross-Connection Control and Source Water Protection Programs remain high priorities in protecting public health and ensuring water system viability. Additionally, the Illinois EPA will support a contractual agreement to work with community water supplies on capacity development.
- Place added priority on increasing the number of inspections to achieve goals and provide emergency and technical assistance to water systems as necessary to maintain Illinois' high public health protection goals.
- Continue to conduct the prevention-oriented programs to protect groundwater required by the Illinois Groundwater and Environmental Protection Acts and recommended by the Interagency Coordinating Committee on Groundwater, Groundwater Advisory Council, and the Priority Groundwater Protection Planning Committees.
- Continue to support the Mahomet Aquifer Task Force.
- Continue to support various Bureau/Agency groundwater related compliance investigations including, but not limited to, assisting in: the enforcement process; preparation of compliance commitment agreements; providing testimony and assisting in the development of agreed upon orders by the court.

PURPOSE OF THIS REPORT

The Illinois EPA and Illinois DPH hope that by making this document available for review the public will have a better understanding of drinking water quality concerns in Illinois. Furthermore, this document is intended to meet several independent reporting requirements of the Safe Drinking Water Act (SDWA) Amendments of 1996, serve as the annual self-assessment for the Public Water System Supervision (PWSS) Grant (which should aid the U.S. EPA Region 5 in oversight of Illinois' primacy programs), as well as reporting requirements of the Illinois Environmental Protection Act (Act).

First, Section 1414(c)(3) of the SDWA requires States with primary enforcement authority to prepare, make readily available to the public, and submit to the Administrator of the U.S. EPA by July 1 of each year, an annual report on violations of national primary drinking water regulations by public water systems.

Second, this report is intended to meet the Capacity Development Program reporting requirements of Section 1420 of the SDWA. The SDWA requires annual documentation to the U.S. EPA and triennial reporting to the Governor on the efficacy of Illinois' program with emphasis on improving technical, managerial and financial capacity of public water systems in Illinois.

Third, States are required to adopt and implement an Operator Certification Program for public water supplies. The Guidelines pursuant to Section 1419(b) of the SDWA require the Illinois EPA to provide information to U.S. EPA annually for program review.

Fourth, Section 4 of the Illinois Groundwater Protection Act requires the Interagency Coordinating Committee on Groundwater (ICCG) to report biennially on groundwater quality and quantity to the Governor and General Assembly. The Illinois EPA chairs the ICCG. Specifically, Division of Public Water Supplies (DPWS) chairs the committee for the Director.

INTRODUCTION

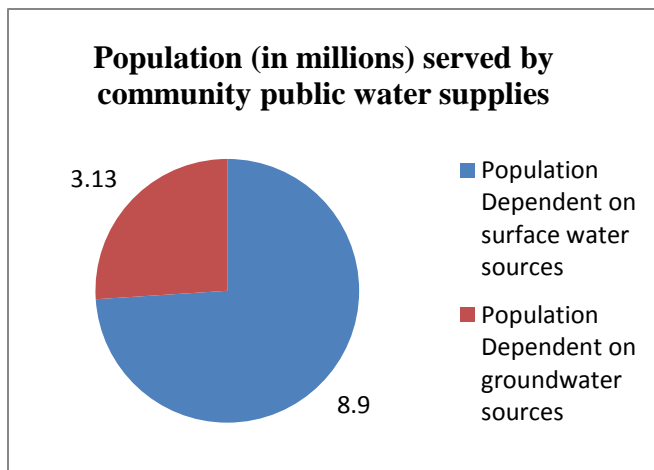
In Illinois, regulatory oversight of Public Water Systems (PWS)² is shared by the Illinois EPA and DPH. The Illinois EPA was designated as Illinois' primary enforcement authority by the U.S. EPA on August 29, 1979. The Illinois EPA, through an Intergovernmental Funding Agreement³ has empowered the Illinois DPH to administer the Non-Community PWS Program while the Illinois EPA retains regulatory authority over Community PWS⁴.

² PWS serve 15 service connections or 25 residents.

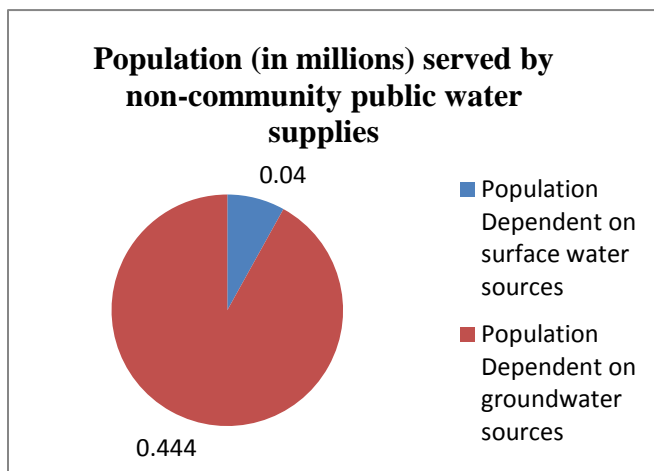
³ U.S. EPA commented that the Non-community primacy program was not discussed in the previous report. This footnote indicates the contrary.

⁴ CWS serve 15 or more year-round service connections or 25 or more year-round residents.

The Illinois EPA regulates 1,749 Community Water Supplies (CWS). These water supplies utilize groundwater and surface water sources of potable water. At this time, 1,145 CWS use groundwater sources, 604 use surface water sources or groundwater sources under the direct influence of surface water (12 use both ground and surface water sources), and 721 supplies purchase water from other CWS. A total of 12,032,670 persons are served by those systems; 39 percent of that population is directly served from surface water systems. 35 percent of the population is served by purchased surface water, two percent by purchased groundwater, and 24 percent by groundwater systems. It is worth noting that although only 26 percent of the population is served by groundwater (including purchased groundwater); groundwater dependent systems comprise almost 66 percent of the total number of community water systems.



The Transient Non-Community (TNC) PWS served a population of 334,789 in 2017, while Non-Transient, Non-Community (NTNC) PWS served a population of 150,518. A total of 444,216 persons are served by systems using groundwater, while only 40,866 persons are served by surface water. These numbers reflect the areas where Non-Community Public Watery Supply (NCPWS) are located predominantly in rural or non-incorporated areas where groundwater is generally available as a source of potable water.



STATUTORY BACKGROUND

The program to protect PWS in Illinois began in 1915 and has undergone considerable legal and regulatory restructuring over the years. In 1970, the General Assembly formulated the Illinois Environmental Protection Act (Act), 415 ILCS 5/1 *et seq.* They found that “state supervision of public water supplies is necessary in order to protect the public from disease and to assure an adequate source of pure water for all beneficial uses.” Additionally, programs to protect groundwater were initiated by the Act in conjunction with “Water Quality Standards” for waters of the state that included under groundwater (35 Ill. Adm. Code 302). In 1991, the Illinois Pollution Control Board adopted comprehensive groundwater quality rules (35 Ill. Adm. Code 620).

The “core mission” of the Illinois EPA’s Division of Public Water Supplies (DPWS) is to ***assure that all persons served by community public water supplies receive water which is safe in quality, clean, adequate in quantity and of satisfactory mineral character for ordinary domestic consumption***. To accomplish this goal, the DPWS oversees the design, construction and operation of CWS in Illinois. More specifically, the Illinois EPA must review the safety and protection of drinking water source water, implement a permitting program for the design, construction and operation of PWS treatment facilities, and maintain a surveillance program of water systems’ untreated and treated waters.

To support these activities, the DPWS has been staffed by a diverse contingent of engineers, geologist and scientist that comprise the Compliance Assurance (CAS), Field Operations (FOS), Groundwater (GWS), and Permit (PS) Sections. The DPWS is further supported by the Infrastructure and Financial Assistance Section (IFAS) of the Bureau of Water (BOW), the Division of Legal Counsel, the Division of Laboratories, the State of Illinois’ Central Management Services and Department of Innovation and Technology.

As mentioned previously, the Illinois DPH supports the Non-Community PWS program through a series of rules including, but not limited to: the Illinois Plumbing Code (77 Ill. Adm. Code 890); the Illinois Water Well Construction Code (415 ILCS 30); the Surface Source Water Treatment Code (77 Ill. Adm. Code 930) and the Drinking Water Systems Code (77 Ill. Adm. Code 900). The Illinois DPH’s Division of Environmental Health works to reduce the incidence of disease and injury related to environmental factors that fall within five major areas of responsibility: rulemaking; plan reviews and construction permits; inspections; vocational and facility licensing; and engineering and toxicological reports.

To support these areas of responsibility within the Non-Community PWS, Illinois DPH has field staff located in the Department’s six Regional Offices (RO) and leverages the resources of Local Health Departments (LHD). Compliance assurance and engineering services are generally conducted by staff located in the central office in Springfield. Consistent with the requirements of the Safe Drinking Water Act (SDWA) program activities include: sanitary surveys, water analysis and reporting; plan review; technical assistance; and training and education.

Under the SDWA and subsequent amendments, the U.S. EPA sets national limits on contaminant levels in drinking water to ensure that the water is safe for human consumption. These limits are known as Maximum Contaminant Levels (MCL) and Maximum Residual Disinfectant Levels (MRDL). For some regulations, treatment techniques are established in lieu of an MCL to control unacceptable levels of contaminants in water. The U.S. EPA also requires PWS to notify their consumers when they have violated these regulations. The consumer notifications must provide an understandable explanation of the nature of the violation, its potential adverse health effects, steps that the PWS is undertaking to correct the violation and the possibility of using alternative water supplies during the violation.

Through the ongoing review of Illinois EPA’s programs, the U.S. EPA has granted the Illinois EPA primary enforcement authority to determine the frequency that CWS monitor and report on the contaminants present in their water. (Generally, the larger the population served by a water system, the larger the number of samples collected and the more frequent the monitoring and

reporting (M&R) requirements.) Additionally, the U.S. EPA supports the development of new MCLs by requiring CWS to monitor and report on currently unregulated contaminants. As data are acquired for these contaminants, scientific analyses are conducted to determine the need for development of new MCLs.

In 1998, the Illinois EPA began making CWS revolving loans through a partnership with the U.S. EPA and the Federal Government. Since this time, the Illinois EPA has made more than \$1.7 billion in revolving loans to water systems. This money has gone to resolving MCL issues and improving the state's aging infrastructure.

REPORTING REQUIREMENTS

Each quarter, the Illinois EPA submits data to the Federal Safe Drinking Water Information System (SDWIS/FEDERAL), an automated database maintained by the U.S. EPA. The data submitted by Illinois include, but are not limited to the following:

- PWS inventory information;
- incidences of violations of MCLs, MRDLs, monitoring, and Treatment Technique violations;
- information on enforcement activity related to these violations; and
- source water protection information.

The Illinois EPA publishes a report on its web site which contains information on permits issued during the previous year. The report includes CWS construction and operating permit process including milestones that measure program efficacy.

The ICCG reports biennially to the Governor and the General Assembly on groundwater quality, quantity, and the State's enforcement efforts.

OVERVIEW OF THE PWS PROGRAMS IN ILLINOIS

Community Public Water Supply Surveillance Program

To sustain compliance with regulatory requirements and ensure the safety of Illinois CWS consumers, the Illinois EPA is committed to completing engineering evaluations (sanitary surveys) as frequently as possible. Through the DPWS' institutional knowledge, the more frequent the contact between the Illinois EPA and CWS, the higher the percentage of compliant water systems.

The focus of the Illinois EPA's inspections of CWS continues to be an evaluation of the general operation and maintenance practices at the respective systems. Inspectors evaluate state regulations under 35 Ill. Adm. Code and various ancillary programs that affect the CWS, such as the regulations under the *Public Health Security & Bioterrorism Preparedness & Response Act of 2002*. Fundamental aspects of these inspections also revolve around the provision of technical assistance, identification of significant deficiencies and necessary corrective actions to ensure the safety of drinking water supplies. The DPWS conducts surveillance and inspections at CWS from six regional offices located in Rockford, Elgin, Champaign, Springfield, Collinsville and Marion.

With assistance of national stakeholder groups, the U.S. EPA has established that over the next two-year reporting cycle, state primary enforcement programs should complete sanitary surveys at a minimum of 79.5 percent of the CWS in their state on a 3-year frequency. For this reporting period, the Illinois EPA has conducted sanitary surveys at approximately 76.8 percent (1,344 of 1,749) of the CWS under its regulatory authority.

Field Operations Section	
Springfield Central Office	Champaign Regional Office
<i>David McMillan, Division Manager</i>	Vacant, Manager
Rick Cobb, Deputy Division Manager	Matt Talbert
Steve Vance, Manager	Vacant (Env. Protection Engineer)
Rockford Regional Office	Springfield Regional Office
Vacant, Manager	David Cook, Manager
Joy Bliton	John Bartolomucci
Gene Forster	Michael Dragovich
	Vacant (Env. Protection Engineer)
Elgin Regional Office	Collinsville Regional Office
Segundo Nallatan, Manager	Gayle Renth, Manager
Dwayne Booker	James Blessman
Grover Hopkins	Regan Taylor
Dharmishtha Patel	
Jeff Peca	Marion Regional Office
Shibu Vazha	Vacant, Manager
Marlene Diamond (Admin. Support)	John Kinder
	Chris Johnston

Non-Community Public Water Supply Surveillance Program

The NCPWS surveillance Program shares many commonalities with the CWS surveillance activities. Sanitary surveys are intended to review the adequacy of the water system's source of water, facilities, equipment, operation and maintenance to ensure the production and distribution of safe drinking water. Sanitary surveys for NCPWS are intended to identify and correct significant deficiencies and are conducted once every two years by the Illinois DPH or LHD field staff. Illinois DPH Field Offices are located in Rockford, Peoria, Champaign, Marion, Edwardsville and West Chicago. There are 93 LHDs throughout the State that help conduct NCPWS surveillance and perform sanitary surveys. Illinois DPH RO staff and LHD staff that perform sanitary surveys generally work in several Public Health Surveillance Programs and many times conduct multiple program inspections while visiting a NCPWS.

Illinois DPH Policy sets a goal for completing sanitary surveys once every two years. For the 2015-2017 calendar year time-frame, the Illinois DPH has conducted sanitary surveys at approximately 95.5 percent of the NCPWS under its regulatory authority.

Community Public Water Supply Compliance Assurance Program

To ensure Illinois CWS are in compliance with state and federal statutes and regulations, the Illinois Pollution Control Board (IPCB) adopts identical in substance regulatory provisions from the U.S. EPA per, Section 5/7.2 of the Act. Ensuring that CWS are in compliance with these regulations, which include MCLs in drinking water, is substantially the core mission of the

Compliance Assurance Section (CAS). Additionally, CAS coordinates technical outreach to water systems to assure proactive compliance measures are taken ahead of formal enforcement. The DPWS conducts compliance efforts for CWS from the central office in Springfield.

Compliance Assurance Section
Mary Reed, Manager
Andrea Rhodes, Lead Specialist
Shirley Leonard (Office Assistant)
Vacant (Environmental Protection Specialist)
Vacant (Office Coordinator 2)
Chemical Monitoring Unit
Jeri Long, Manager
Paul Connelly
Tatum DeMay
Vacant (Environmental Protection Specialist)

Non-Community Public Water Supply Compliance Assurance Program

Similar to the CWS compliance program, the Illinois DPH tracks water system compliance with state and federal statutes and regulations. All NCPWS are tested at least annually for total coliform bacteria and nitrate. NTNC PWS are also tested for contaminants, such as pesticides, solvents, lead and copper, arsenic, metals and disinfection byproducts. Responsibility for tracking water system compliance is shared by Regional and central office staff. Data tracking activities are conducted by central office staff.

Personnel
Eric Portz, Safe Drinking Water Program Manager
Jamie Tosetti, Environmental Health Specialist

Community Public Water Supply Operator Certification Program

The Illinois Public Water Supply Operations Act (415 ILCS 45/) establishes the statutory basis for the community water supply operator certification program in Illinois. This statute further establishes a reliable mechanism for Illinois EPA communications with CWS, ensuring that Responsible Operators in Charge supervise the portions of the CWS for which they are accountable, and requiring the timely submittal of information that the Illinois EPA relies upon to protect drinking water quality. Finally, this statute provides the basis for the regulatory requirements found in 35 Ill. Adm. Code 681. The most recent amendments to this part became effective in 2017. The 2017 proposal focused on further defining the experience requirements to become a licensed water supply operator in Illinois.

The Illinois EPA would also like to make note of our training partners. The operator training opportunities provided by the Environmental Resources Training Center at Southern Illinois University-Edwardsville, the Illinois Potable Water Supply Operators Association, Illinois Rural Water Association, Illinois Section of the American Water Works Association and two-year colleges are a huge factor in the successful treatment of potable water in Illinois. Whether large

conferences, webinars, semester long classes, regional forums or water system specific curricula these educators, associations and individuals have afforded opportunities to water professionals in Illinois that is unparalleled across the country.

The Illinois EPA's CWS Operator Certification Program is administered by the CAS of the DPWS. The Illinois EPA estimates that this program requires approximately two full time staff. The Operator Certification Program is coordinated by a staff member from the CAS of the DPWS:

Personnel
Andrea Rhodes, Operator Certification Coordinator

Non-Community Public Water Supply Operator Certification Program

The Illinois DPH NCPWS program administers a program to properly credential NTNC PWS from the central office in Springfield. The Illinois DPH uses the services of the Water Quality Association to conduct initial Operator Certification Training and administer certification examinations. The following Illinois DPH Environmental Health Services staff is actively involved in the administration of the program:

Personnel
Eric Portz, Safe Drinking Water Program Manager
Elaine Beard, Administrative Assistant

Community Public Water Supply Capacity Development Program

The Illinois EPA and DPH continue to support the Capacity Development Program and are convinced that maintaining PWS capacity is essential in operating a safe drinking water system. The original premises presented in the Illinois Capacity Development Strategy have proven accurate. Technical assistance remains the cornerstone in developing capacity in PWS that are in distress. Although the resource demands of capacity assistance are significant, Illinois continues to believe that capacity development is an integral element of the working relationship between regulatory staff and PWS officials. As such, capacity demonstration elements will continue to be integrated into the routine activities of both Agencies in order to ensure continued progress.

It is difficult to estimate the full-time equivalents devoted to this program as it is integrated into all aspects of the drinking water program. In several recent U.S. EPA evaluations of the Illinois Capacity Development Program, U.S. EPA has expressed concerns that this program is understaffed. The Capacity Development is now coordinated by a staff member from the Permit Section of the DPWS:

Personnel
Kent Cook, Capacity Development Coordinator

Non-Community Public Water Supply Capacity Development Program

The Safe Drinking Water Program Manager coordinates Capacity Development Program activities at Illinois DPH. Currently, the Program Manager reviews new Non-Transient Non-Community Public Water System Construction Permit Applications and performs capacity reviews on these new

systems. When capacity reviews are needed at existing Non-Transient Non-Community Water Systems the Program Manager coordinates the reviews with water system personnel and RO/LHD field staff.

Cross-Connection Control Program

The Cross-Connection Control Program in Illinois is one of several tools intended to protect water consumers in the state. Statutes in Illinois establish that no person can threaten a water supply and water supply officials are responsible for protecting their water mains from connections that have the potential to allow the backflow of contaminants into their respective distribution systems (a cross-connection). Regulations have been developed and modified to outline what comprises a viable Cross-Connection Control Program.

Water supplies in Illinois have significant partners in the implementation of their Cross-Connection Control Program. While it is up to the Illinois EPA to ensure that CWS have viable programs through physical inspection of water treatment facilities and documentation reviews, the Illinois DPH deals with the plumbing aspects of the program.

The Environmental Resources Training Center located at Southern Illinois University-Edwardsville provides for the training of licensed plumbers who wish to become certified Cross-Connection Control Device Inspectors (CCCDI). While any Illinois licensed plumber can inspect plumbing, or install a backflow device or assembly, only an Illinois CCCDI can test that device or assembly. Additionally, the Illinois EPA relies upon the Environmental Resources Training Center to track and properly credential CCCDIs.

It is difficult to estimate the full-time equivalents devoted to this program as it is integrated into all aspects of the DPWS's programs. However, the Cross-Connection Control Program Coordinator Position remains vacant at this time.

Groundwater and Source Water Protection Program

The Groundwater and Source Water Protection Program in Illinois is framed by Public Acts 83-1268 and 85-063, and the SDWA Section 1453. These laws amended the Act, created the Illinois Groundwater Protection Act (IGPA), and led to the development of IPCB regulations for groundwater quality standards and protection requirements. Further, the IGPA requires stakeholder input from the Interagency Coordinating Committee on Groundwater (ICCG) and Groundwater Advisory Council (GAC) on the development of groundwater protection programs, laws and policies. The Act was amended to require the development and implementation of a "priority" Regional Groundwater Protection Planning Program comprised of local stakeholders. In addition, the IGPA requires the ICCG to undertake a comprehensive evaluation of progress being made under these laws with biennial reporting to the Governor and General Assembly. The DPWS source water protection initiatives are generally managed from the central office in Springfield and the Rockford Office by the GWS of the DPWS.

Further, the IGPA responds to groundwater management by emphasizing a prevention-oriented process that relies upon state and local partnerships. The IGPA establishes a unified groundwater protection policy by: establishing groundwater quality standards (35 Ill. Adm. Code 620); requiring technology control regulations (35 Ill. Adm. Code 615/616); establishing a

groundwater education program; establishing water well protection zones (35 Ill. Adm. Code 618 and 671); providing for surveys, mapping, and assessments; monitoring ambient groundwater quality; establishing a regional groundwater protection-planning program; and establishing authority for recharge area protection (35 Ill. Adm. Code 617). Part 620 also includes an expedited process to designate Class III: Special Resource Groundwater Areas recharging dedicated nature preserves.

Every two years, ambient groundwater monitoring is reported at:

<http://www.epa.illinois.gov/topics/water-quality/groundwater/ambient-monitoring/index> .

The Illinois EPA is currently working on a new report pursuant to Section 13.1 of the Act and Section 7 of the IGPA that should be published in 2018. This report will include a focus on the Mahomet Sole Source Aquifer and discuss the first-year results of a pilot real-time groundwater monitoring well in the Havana Lowlands Area with the United States Geological Survey (USGS). The objectives are to determine the range and extent of

The Illinois EPA is currently working on a new report that should be published in 2018. This report will include a focus on the Mahomet Sole Source Aquifer and discuss the first-year results of a pilot real-time groundwater monitoring well in the Havana Lowlands Area with the United States Geological Survey (USGS).

temporal variation of nitrate concentrations in the Havana Lowlands, an area of highly hydraulic conductive aquifer materials located next to the Illinois River. Temporal nitrate concentrations, which discharge into nearby surface water bodies including the Illinois River, may occur from changing seasonal groundwater conditions and/or farm practices such as irrigation or fertigation. Continuous monitoring, assessment, and documentation of changes in nitrate (and other parameters) provides data that would not otherwise be evident or captured by discrete sampling, at this area of historically elevated nitrate concentrations.

This project is providing key beneficial Nutrient Loss Reduction Strategy information in assessing and managing nitrate in groundwater by:

1. Determining fluctuations in nitrate concentrations resulting from seasonal climatic changes or groundwater conditions such as dissolved oxygen or pH.
2. Conducting nitrogen isotope work for assessing the amount of denitrification and source indication in Quiver Creek riparian zone.
3. Determining temporal nitrate concentrations resulting from agricultural practices such as irrigation or fertigation and possible best management practices that could mitigate these changes. Monitoring has been conducted for one year at the end of March 2018 measuring continuous nitrate and temperature, pH, dissolved oxygen (DO), specific conductivity, in the well and real-time discrete nitrate in Quiver Creek during visits.

Personnel	
Groundwater Section	Source Water Protection Unit
Rick Cobb Manager	Anthony Dulka, Manager
Vacant, Office Associate	Joe Konczyk (Springfield Office)
	Laurie Moyer (Rockford Office)
	Greg White (Rockford Office)
Geographical Analysis Unit	Hydrogeology and Compliance Unit
Vacant, Manager	Bill Buscher, Manager
Ryan Bennett	Lynn Dunaway, Lead Geologist
Alan Fuhrman	Amy Zimmer
Vacant, Environmental Protection Geologist	Vacant, Environmental Protection Geologist

Permitting Program

Correct construction and operation of a PWS is essential for providing a safe and adequate supply of drinking water. The DPWS conducts all permitting function for CWS from the central office in Springfield.

Personnel	
Permit Section	
David Cook, Acting Manager	Chris Kohrman
Rob Watson, Lead Engineer	Gerard Zimmer
Kent Cook	Carolyn Ealey, Office Associate
Cody Bauer	Deborah McCrary, Office Associate
Vacant, Environmental Protection Engineer	

The Safe Drinking Water Program Manager conducts all permitting functions for NTNCWS from the central office in Springfield.

Personnel
Eric Portz, Safe Drinking Water Program Manager

Public Water Supply Revolving Loan Program

The PWS revolving loan program is administered by the Illinois EPA's BOW-Infrastructure and Financial Assistance Section (IFAS). IFAS also administers the Water Pollution Control revolving loan program. IFAS manages all aspects of the funding process with input from the DPWS. Detailed program information is available on the Illinois EPA web site at <http://www.epa.illinois.gov/topics/grants-loans/state-revolving-fund/index> .

Generally, the first step toward the Illinois EPA working with an applicant to fund a project is the submittal of a planning report, called a “Project Plan” in Illinois’ Administrative Loan Rules. An applicant must also complete a Project Planning Submittal Checklist which identifies the location of other necessary information for application processing. Once a scope of work is identified in a “Project Plan,” IFAS staff will distribute the planning report to the PS and FOS for review and approval. The CAS is also consulted to ensure funding is provided to address the loan applicant’s most pressing needs. Once comments from each of these Sections are received, IFAS sends a review letter requesting any additional information that is needed or answers to any questions the Illinois EPA may have. IFAS then produces a Project Summary document and the loan applicant will be required to either hold a public hearing (if the potential for environmental issues exists or if financial impacts to the loan applicant’s residents are significant), or simply place an ad in the local newspaper announcing the proposed project and request for funding. The public hearing, or placement of an ad in the local newspaper, is followed by a 10-day public comment period allowing for the submission of written comments concerning the proposed project. Once the public comment period is over and IFAS receives proof of the public notification in the newspaper and any responses to any public comments, the Illinois EPA will issue Planning Approval. Planning Approval is good for five years. Therefore, once a scope of work has been identified and approved, the loan applicant can pursue funding for any portion(s) of that scope within the following five years.

The Illinois EPA’s revolving loan funding process is unlike that of a bank in the respect that the Illinois EPA does not offer the funding agreement until after the recipient has demonstrated a definitive need for the project, obtained Illinois EPA Planning Approval, obtained all necessary permits, demonstrated the means and ability to repay the funding, adopted all necessary

The U.S. EPA has determined that lead service line replacement is an eligible loan expense. Following a legislative amendment, the Illinois EPA has processing its first lead service line replacement project in 2017.

ordinances to do so and then gone out to bid on the project. Once a “winning/low” bidder is identified, the Illinois EPA can issue the Loan Agreement followed by the loan applicant entering into the contract for construction of the project. Currently, the Illinois EPA can fund the construction costs as well as design engineering and construction engineering/oversight. As of July 1, 2017, costs necessary for planning efforts related to a loan funded project are loan eligible. At the present time, loan applicants are anticipating a “Base” interest rate of approximately 2.82 percent for State Fiscal Year 2019. Interest rates are established each July 1 for the wastewater loan program, and the drinking water loan program, for the following 12-month period based upon one-half of the previous 12-month mean interest rate of the 20 General Obligation Bond Buyer Index. As of July 1, 2017, loan applicants can qualify for reduced interest rates (Small Community Rate and/or Hardship Rate) based upon their service population, median household income, unemployment rate and population trends. Loan applicants qualifying for the Small Community Rate or Hardship Rate also have the option of extending the term of their loan beyond the traditional 20 years, up to a maximum of 30 years, provided the term of the loan exceeds the useful life of the funded project. Details on the fixed loan rate of a loan agreement and repayment periods can be found within Title 35 Ill. Adm. Code 662.

The BOW estimates that this program currently utilizes 15 full-time staff.

MEASURING RESULTS

Numerous tools are used to measure program effectiveness. The SDWIS/STATE is a key component in the tracking of overall program effectiveness. Quarterly uploads of data by the DPWS CAS and the Illinois EPA Division of Information Service to U.S. EPA is the foundation by which the Illinois EPA and CWS are evaluated with regard to primacy requirements and program measures. Beyond these federal requirements, SDWIS/STATE is used by the DPWS to ensure that routine inspections of CWS are occurring, proper permits are obtained and safe water is being supplied to Illinois' water consumers. Additionally, the PS utilizes a permit tracking data system to ensure that construction and operating permits are issued in a timely fashion. This tracking system is reliant upon the SDWIS/STATE as a framework as is the Groundwater Section's PROTEUS system. PROTEUS is a database designed using web-based development tools. Groundwater, source water, and PWS engineering evaluation data and SDWIS/STATE continue to be integrated into the PROTEUS database.

Community Water Supply Compliance Assurance Program

For calendar year 2017, 99.3 percent (11,952,216 of 12,032,670) of the population served by CWS in Illinois receive drinking water that meets all applicable health-based drinking water standards. Also, for calendar year 2017, 97.9 percent (1,713 of 1,749) of CWS in Illinois meet all applicable health-based drinking water standards.

Each quarter, the Illinois EPA submits data to the SDWIS/FEDERAL. The data submitted include, but are not limited to: PWS inventory information; the incidences of violations of Maximum Contaminant Levels; Maximum Residual Disinfectant Levels; monitoring, and treatment technique violations; and information on enforcement activity related to these violations. This report provides the numbers of violations in each of six categories:

- 1) Maximum Contaminant Level violations,
- 2) Maximum Residual Disinfectant Level violations,
- 3) Treatment Technique requirement violations,
- 4) Significant violations of Monitoring and Reporting requirement violations,
- 5) Significant violations of the Consumer Notification requirements,
- 6) and Violations of Variances and Exemptions.

Appendix A of this report is a listing for each contaminant regulated by the SDWA, which includes the numbers of MCL, MRDL, Treatment Technique and M&R requirement violations for each compliance period during calendar year 2017, the number of violations that were returned to compliance (RTC), and the number of systems incurring violations. Appendix B and Appendix C of this report contain a detailed listing of PWS with MCL, MRDL, or Treatment Technique violations.

Acute vs. Chronic Indicators – It is important that safe drinking water be free of contamination which has the potential to cause either short-term or long-term health effects. Contaminants fall into two groups according to the health effects that they cause:

ACUTE	CHRONIC
<p>Acute effects occur within hours or days of the time that a person consumes a contaminant. People can suffer acute health effects from almost any contaminant if they are exposed to extraordinarily high levels (as in the case of a spill). In drinking water, microbes, such as bacteria and viruses, are the contaminants with the greatest chance of reaching levels high enough to cause acute health effects. Most people’s bodies can fight off these microbial contaminants the way they fight off germs; and these acute contaminants typically do not have permanent effects. Nonetheless, when high enough levels occur, they can make people ill, and can be dangerous or deadly for infants, the elderly and persons whose immune systems are already weak due to HIV/AIDS, chemotherapy, steroid use, or another reason.</p>	<p>Chronic effects occur after people consume a contaminant at levels over EPA’s safety standards for many years. U.S. EPA develops the standards for chronic MCLs on the basis that a person may have an adverse health effect after consuming two liters of water daily over a 70-year lifetime. The drinking water contaminants that can have chronic effects are chemicals (such as disinfection by-products, solvents, and pesticides), radionuclides (such as radium), and minerals (such as arsenic). Examples of the chronic effects of drinking water contaminants are cancer, liver or kidney problems, or reproductive difficulties.</p>

As described previously, over 99 percent of the population served by Illinois CWS received drinking water in compliance with acute (short-term) health requirements, and 99 percent were in compliance with chronic (long-term) health requirements. It is important to note that most non-compliance was for a short duration, and the potential for health risk was minimized through prompt corrective action by the water supplies. Supplies with microbial problems (bacterial or turbidity non-compliance) are required to issue boil orders when the violation occurs. Community water systems with acute MCLs were limited to 5 (nitrate, nitrite and e coli MCL and SWTR TT) water systems.

Lead and Copper Compliance – Lead and copper are regulated by a Treatment Technique that requires systems to control the corrosiveness of their water. The lead action level (15 parts per billion), when exceeded in more than ten percent of the water samples collected in consumers’ homes, requires the water supply to implement optimal corrosion control treatment plans or procedures which would prevent

In 2016, beyond the regulatory requirements of the Lead and Copper Rule, the Illinois EPA:

- Made revisions to sampling instructions and education materials to CWSs based upon information supplied by U.S. EPA, including deletion of any mention of “pre-flushing” lead service lines the night before sample collection and removing faucet aerators;
- Expedited the path from lab analysis of samples to consumers, in that CWSs now notify consumer/volunteer sample collectors of results greater than 15 ppb within 10 days of becoming aware of lab results.

anticipated adverse health effects and ensure that lead or copper is controlled in the drinking water.

In 2017, 615 of 1,749 CWS sampled for lead and copper. Ten of these systems were over lead action level. These water systems were required to make timely notification to all water consumers of the action level exceedance. Prior to this comprehensive announcement, water systems are required to advise voluntary monitoring participants of the outcome of their respective laboratory analysis and provide information regarding health effects and ways to minimize lead in drinking water. The notice to these monitoring participants is expedited (essentially immediate upon receipt of results) if the lead level detected is above a 15 part per billion threshold. Where necessary, the Illinois EPA follows up to ensure this notification has been properly administered.

Consumer Awareness for CWS – Every CWS must provide an annual water quality report (sometimes called a Consumer Confidence Report or CCR) to its customers. The report provides information on local drinking water quality, including the water's source, the contaminants found in the water, and how consumers can get involved in protecting drinking water. If the consumers have been looking for specific information about their drinking water, this annual water quality report will provide them with the information they need. In 2017, 96 percent of the CWS issued a satisfactory Consumer Confidence Report by the annual July 1 deadline.

Public Notification for CWS – In conjunction with each violation described in the previous sections, public notification is required to be issued. Public notification provides a means to protect public health, build trust with consumers through open and honest sharing of information, and establishes an ongoing, positive relationship with the community. Public notice can also be used to help consumers understand rate increases and support increased funding for drinking water treatment and protection. Properly done, the notices can work for the benefit of the water supplier as well as the public. If a problem occurs, educated consumers are more likely to understand the issue and support the actions a water utility must take. Many deadlines for public notice issuance depend upon prompt contact and discussion between the water system and Illinois EPA. Efficient communication with prompt reporting is the cornerstone for compliance. In 2017, less than two percent of the community water systems failed to meet all public notice requirements.

Public Education for Lead for CWS – Public education materials for lead must be provided to customers if a CWS exceeds the lead action level in their most current round of monitoring. As mentioned previously, approximately 98.3 percent of CWS were below the lead action level in their most recent round of sampling and therefore public education was not required. During 2017, no public education violation was issued.

Monitoring and Reporting Compliance for CWS – The U.S. EPA has established contaminant-specific minimum testing schedules for public water systems. Water systems typically monitor for bacteria, protozoa and viruses, nitrate and nitrite, volatile organic compounds (e.g., benzene), synthetic organic compounds (e.g., pesticides), inorganics (e.g., arsenic), lead and copper, radionuclides, and disinfectant disinfection by-products. Although failure to monitor does not necessarily suggest safety problems, conducting the required M&R is critical to ensure that

problems will be detected. In 2017, 93 percent of community supplies were compliant with M&R requirements.

Illinois EPA Enforcement Strategy – The Illinois EPA has enforcement authority over CWS in Illinois. Illinois EPA has a standardized protocol for all enforcement matters to ensure unilateral, consistent treatment of enforcement cases. For any violation outlined in the previous pages, a failure to take corrective action could result in the water system being considered for enforcement under Section 31 of the Act. Enforcement normally begins with the identification of a significant unresolved violation by technical staff. Information about the violator/violations is forwarded to the Compliance Group (composed of Section Managers). If the Compliance Group determines a Violation Notice (VN) is warranted, the VN recommendation is sent to the Illinois EPA's Compliance Management Panel for review. After review by the Panel, the CAS prepares and issues the VN. After the VN is sent, the violator will have a set time period (45 days or 60 days depending on whether a meeting is requested) to respond in writing with a Proposed Compliance Commitment Agreement (CCA). Enforcement activities are suspended if the proposed CCA is accepted by the Illinois EPA. If at a later point in time, the violator does not follow the CCA agreement, enforcement may resume.

If the proposed CCA is not accepted or the violator fails to respond to the VN, the case is brought before the Enforcement Decision Group (EDG), composed of senior BOW and Division of Legal Counsel management. The EDG determines the next course of action such as recommending a case for formal enforcement. Formal enforcement normally consists of referring the water system to the Illinois Attorney General or the U.S. EPA for filing with a court to direct corrective actions, which may include imposition of penalties.

Violation Summary – Current and historical violation data⁵ and follow-up enforcement actions can be found at the following web site: <http://water.epa.state.il.us/dww/index.jsp> .

The following table summarizes the number of CWS in violation with aspects of the drinking water compliance program during 2017.

⁵ The data for this reporting originates and is maintained in the Illinois Safe Drinking Water Act Information System.

Violations during Calendar Year 2017 COMMUNITY Water Systems						
Total Number of Regulated Systems					1749	
Total Number of Systems in Violation					274	
Total Number of Violations					349	
Rule Subtotal by Violation Type						
Rule Category	MCLs		Treatment Techniques		Significant Monitoring Reporting	
	Number of Violations	Number of Systems*	Number of Violations	Number of Systems*	Number of Violations	Number of Systems*
Radiological	18	6	NA	NA	7	6
Nitrates	4	2	NA	NA	7	6
IOCs	17	5	NA	NA	1	1
SOCs	1	1	NA	NA	1	1
VOCs	0	0	NA	NA	0	0
Coliform	1	1	NA	NA	29	28
Groundwater Rule	NA	NA	0	0	1	1
All SWTR	NA	NA	3	2	1	1
DBPR (Stage 1) (chlorine_chloramines)	NA	NA	NA	NA	38	36
DBPR (Stage 2)	20	10	0	0	50	25
Lead & Copper	NA	NA	7	5	29	24
Lead Consumer Notice	NA	NA	NA	NA	53	53
Consumer Awareness	NA	NA	NA	NA	61	60
TOTALS	61	25	10	7	278	242
	Percentage of Systems In Compliance = 98%		Percentage of Systems In Compliance = 99%		Percentage of Systems In Compliance = 86%	

Although a CWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of NUMBER OF CWS IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

Non-Community Water Supply Compliance Assurance Program

Both NTNC and TNC are required to monitor for contaminants like CWS and issue public notification if in violation. However, TNC only monitor for nitrates, coliform bacteria, and are subject to some requirements of the surface water treatment rule (if they use surface water). NTNC monitors the same contaminants as CWS, but are not required to monitor radionuclides or issue/publish a Consumer Confidence Report.

Lead and Copper Rule (LCR) – The Illinois DPH conducts a thorough review of sample results at NTNC PWS with special emphasis on schools and daycares. The Illinois DPH reviewed and revised sample site selection criteria and sampling protocol in 2016. These documents were revised based on sampling protocol recommendations from U.S. EPA following Flint and ensure sample site locations represent the highest level of health protection based on the criteria of human consumption and “worst case” risk for lead leaching. Illinois DPH included these documents in a quarterly sample schedule letter sent to all NTNC PWS in June 2016 and

requested that all systems re-submit a sample site plan prior to their next Lead/Copper sampling event. This was fully implemented in 2017 and all Lead and Copper sampling are now conducted following the revised sample site collection criteria and sampling protocol.

At the end of 2017, only 13_NTNC PWS were over the lead action level, thus 97 percent of systems were below the action level. Illinois DPH will continue to follow-up with these ten water systems to meet the lead action levels and the follow-up activities required under the LCR.

Illinois DHP Enforcement Strategy – The Illinois DPH has enforcement authority over NCPWS in Illinois. Illinois DPH has a standard protocol for enforcement matters to ensure consistent treatment of enforcement cases. For any violation outlined in the previous pages, a failure to take corrective action could result in the water system being considered for enforcement under Section 9 of the Illinois Groundwater Protection Act. Enforcement normally begins with identification of a significant unresolved violation by technical staff. The Illinois DPH RO or LHD determines an appropriate amount of time to perform corrective action and send a Violation Notice (VN) to the water supply requesting corrective action within the time frame allowed. If corrective action is not performed within this time frame, information is forwarded to the Illinois DPH central office to initiate formal enforcement action. A letter is then sent to the State’s Attorney, the Attorney General or U.S. EPA requesting enforcement action which may include imposition of penalties.

Illinois DPH uses the automated compliance determination modules for compliance for most of the major rules. Manual compliance is used for surface water rule compliance as Illinois DPH numbers have now decreased to ten surface water systems and only three of these are Non-Transient Non-Community Water systems with conventional treatment. The other seven systems are Transient Non-Community Water Systems that utilize slow sand filtration systems.

As detailed under future directives below, Illinois DPH was able to complete 2017 nitrate compliance determinations and will provide complete reporting of the violations enumerated in the table below. Unfortunately, Revised Total Coliform Rule (RTCR) and Groundwater (GW) Rule compliance determinations and reporting for treatment technique and monitoring violations could not be completed again in 2017. Resource limitations and stressors that contributed to this deficiency are also detailed under future directives.

Violation Summary – During calendar year 2017, the percentage of persons served by Illinois NCPWS that were compliant with all health requirements, treatment techniques, or health advisories was 99.6 percent**. The following table summarizes the number of NCPWS in violation with aspects of the drinking water compliance program.⁶

⁶ These figures are not complete because Coliform Treatment Technique and Coliform / GW Rule monitoring data have not been verified with Local Health Department (LHD) staff, which has direct oversight for these water systems. MCL data is complete.

Violations during Calendar Year 2017 NON-COMMUNITY Water Systems						
Total Number of Regulated Systems				3,768		
Total Number of Systems in Violation				952**		
Total Number of Violations				2824**		
Rule Subtotal by Violation Type						
Rule Category	MCLs		Treatment Techniques		Significant Monitoring Reporting	
	Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems
Radiological	NA	NA	NA	NA	NA	NA
IOCs	16	12	NA	NA	885	811****
SOCs	0	0	NA	NA	386	10
VOCs	0	0	NA	NA	1386	56
Coliform	11	11	0*	N*	42*	42*
Groundwater Rule	NA	NA	0	0	0*	0*
SWTRs	NA	NA	1	1	0	0
DBPR (Stage 1)	0	0	0	0	24	11
Lead & Copper	NA	NA	0	0	73	68
Consumer Awareness	NA	NA	NA	NA	0	0***
TOTALS	27	23	1**	1**	2796**	928**
	Percentage of Systems In Compliance = 99.4%		Percentage of Systems In Compliance = 99.9%		Percentage of Systems In Compliance = 75.4%**	

Although a NCPWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of NUMBER OF NCPWS IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

* These figures have not been verified with Local Health Department staff that have direct oversight for these water systems.

** This data is incomplete at this time due to Coliform and GW Rule treatment technique and monitoring data.

*** DPH does not include public notice for monitoring violations in the compliance rate.

**** This number is very high due to the IDHP lab discontinuing Nitrate testing for Non-Community Water Systems. Illinois DPH is committed to bringing these systems back into compliance for Nitrate Monitoring.

Community Water Supply Operator Certification Program

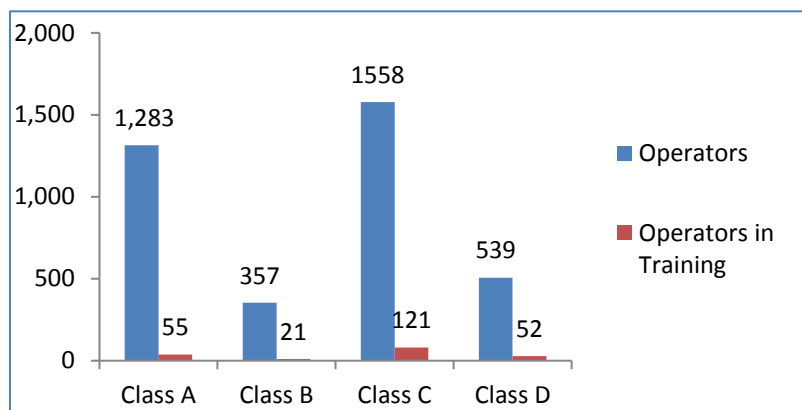
The Illinois EPA administers the Drinking Water Operator Certification through authority granted by the Illinois Public Water Supply Operations Act (PWSOAct), 415 ILCS 45/et seq. This Act provides rulemaking authority to the Illinois EPA. The Illinois EPA has promulgated these rules through the Joint Committee on Administrative Rules in 35 Ill. Adm. Code 681.

Illinois' Operator Certification Regulations can be found at the following web site:
<https://pcb.illinois.gov/SLR/PCBandIEPAEnvironmentalRegulationsTitle35>

In 2017 there were 1,749 Community Water Supplies (CWS) facilities in Illinois. These facilities are divided into four classifications based on the complexity of treatment. Class D facilities are

generally CWS with limited pumpage, storage and distribution systems. Class C facilities are generally CWS whose treatment facilities are limited to chemical addition. Class B facilities are CWS whose treatment facilities generally include filtration, filtration and aeration, or ion exchange. Finally, Class A CWS are water treatment facilities that generally employ surface water treatment techniques, including coagulation, lime softening, sedimentation, or advanced filtration. In 2017, there were 448 Class D, 722 Class C, 418 Class B, and 161 Class A CWS.

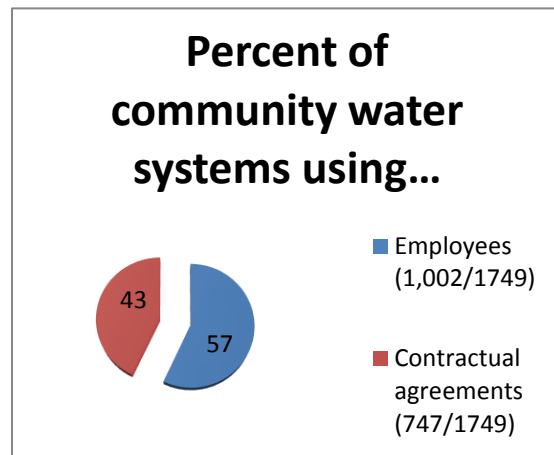
In 2017, in Illinois, there were 3,737 fully certified operators broken down as follows: 1,283 A operators, 357 B operators, 1,558 C operators and 539 D operators. Each CWS in Illinois is required to employ a Responsible Operator in Charge (ROINC) to directly supervise the water system. The ROINC is required to



hold a valid certificate at a level equal to or greater than the classification of the CWS. To become a certified drinking water operator in Illinois, a person must take and pass an exam. The exams are comprised of questions to establish that person has the necessary knowledge to perform the job. Upon passing an exam they achieve the title of Operator in Training (OIT). The certificate for an OIT is valid for a period of six years. An OIT is not fully certified and therefore is not able to act as a ROINC for any water system. In order to obtain full certification, an OIT is required to submit an application showing that the education (a high school diploma or GED), and experience requirements have been met for the level of certification requested. The minimum experience requirements defined in the regulation must be met before full certification will be granted. A portion of the experience requirements may be met with advanced education or training pertinent to the field. A person may hold a valid certification and be an OIT at a higher certification level at the same time. During 2017 there were a total of 249 OITs broken down as follows: 55 A OITs, 21 B OITs, 121 C OITs and 52 D OITs. Of the total number of OITs 68 individuals hold valid certifications at one level and hold an OIT designation at a higher level.

Early in the Operator Certification program, “grandfathering” of operators was permitted. Upon successful completion of a program, a certificate was awarded at the same level as the water system for which the person was responsible. The certifications were site specific and non-transferable. The grandfathered operator was then required to obtain renewal training hours to maintain their certification. At one time, Illinois had 139 operators with grandfathered certifications. In 2017, only 27 of the certifications were still valid. Illinois no longer issues grandfathered certifications for CWS.

Through April of 2017 the Illinois EPA continued to issue Non-Compliance Advisories (NCAs) to CWSs that were not in compliance with the requirement to have a valid contract with a certified operator. For the majority of CWSs, the NCA was issued because they had a contract that had expired. Unfortunately, the NCAs seemed to be an exercise in paperwork and were not achieving the desired effect. Currently, a CWS is sent a reminder letter 60 days prior to expiration of the contract. If a new contract is not received in a timely manner the Compliance Assurance Section follows up with a phone call to the CWS.



A formal Violation Notice (VN) consistent with Section 31 of the Act is issued once the expiration date has passed. The VN, in turn, can be followed by a Notice of Intent to Pursue Legal Action. The culmination of this process is a referral to the Attorney General's Office to ensure compliance and to seek a monetary penalty. The Illinois EPA generally feels this process has been effective as documented by the high compliance rates described subsequently.

During this reporting period, the Illinois EPA sent 28 NCAs and 26 VNs to water systems to address their lack of properly credentialed operational staff⁷. Of the total number of VNs issued 18 were issued due to failure to submit a contract, 4 were issued for failure to submit a contractual agreement that met all of the required parameters, and 4 were issued due to multiple violations

In 2017, four water systems were enforced against for failure to have a properly accredited responsible operator in charge.

including failure to have a certified operator. Of the four VNs issued due to multiple violations 2 have been referred to the Illinois Attorney General's Office for further enforcement. Only one of the aforementioned CWSs remains without a Responsible Operator in Charge. Of the remaining 22 VNs issued, the average time for resolution is 3 months. This time is due more to procedural restrictions of the section 31 process than submittal of the required contracts. In general, a CWS that receives a VN for failure to submit a contract has a Responsible Operator employed at the facility but is simply lacking the paperwork.

In addition to enforcement actions under Section 31 of the Illinois Environmental Protection Act (Act), the Illinois EPA has additional tools to assure actions by water supply officials are in the best interest of protecting public health:

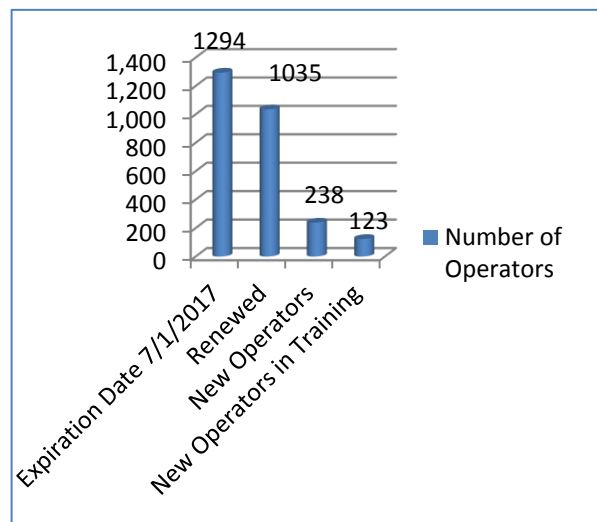
- The PWSOAct gives the Illinois EPA the authority to issue an Administrative Citation (AC) for certain paper work violations committed by ROINC.
 - The Illinois EPA issued 2 ACs in 2017.
- The Act makes it a Class 4 felony for a person to knowingly make a false, fictitious or fraudulent material statement, orally or in writing to the Illinois EPA. Due to budgetary

⁷ In the previous reporting cycle the U.S. EPA questioned whether the Illinois EPA could begin inputting a type 12 violation to track operator noncompliance concerns. Upon research, this code has very limited application and would not supply the intended information.

constraints, the Illinois EPA refers criminal cases to the Criminal Investigation Division of the U.S. EPA.

- No criminal cases were referred during 2017.
- 35 Ill. Adm. Code 681, Subpart G provides the procedure whereby the Illinois EPA may revoke or suspend an operator's certification.
 - There were no suspensions or revocations in 2017.

Approximately one-third of the operators renew their expiring certificates each year. All Illinois drinking water operators are required to have training as a prerequisite for their certificate renewals. Training courses are approved by the Illinois EPA to ensure that the subject matter is acceptable and applicable to the profession. Operators with a valid A or B Certification are required to obtain 30 renewal training hours per each 3-year renewal period. Operators with a valid C or D Certification are required to obtain 15 renewal training hours per each 3-year renewal period. In March of the year that their certificate is set to expire, operators are



sent a Renewal Application Form and Training Summary Report to advise them of their remaining hours required for certificate renewal. The Illinois EPA website provides an *Approved Drinking Water Training Course Catalog*. In this reporting period, 1,035 operators have successfully completed the required training and have renewed their certificates, and 259 operators had certificates that expired. Of the total OITs (249) listed previously, 123 earned their OIT status in 2017. Additionally, 238 operators were newly certified, comprised of: 39 Class A; 25 Class B, 105 Class C; and 69 Class D.

If an operator fails to renew their certification within the three-year period, their certification expires. That operator then has two years in which to provide documentation of successful completion of the required renewal training hours to restore their certification. However, the date of expiration of the restored certificate remains the same as it would have been had he or she renewed on time. If certification is not restored within a two-year period, the certification becomes invalid and to recertify the person must retest and apply as if they were seeking certification for the first time.

The Illinois EPA through statutory authorization administers a fee program to recover a portion of the cost of administering the Operator Certification Program. Certification fees are processed daily by the CAS and sent to the Illinois EPA's Division of Fiscal Services. These fees are tracked on monthly reports of the fees collected for application, renewal, and reinstatement. The Illinois EPA continues to emphasize the importance of the Operator Certification Program and utilizes several funding mechanisms to overcome shortfalls in the existing fee structure.

The success of the program also relies on both internal and external reviews of the CWS Operator Certification Program. During 2017, the Joint Committee on Administrative Rules (JCAR) finalized a 2016 proposal by the Illinois EPA for revisions and clarifications within the existing operator certification regulations.

In 2018 the Illinois EPA is hopeful that enhancements will be made to the online Drinking Water Operator Database that tracks individual certification status renewal training credit hours. (see: <http://dataservices.epa.illinois.gov/operatorcertification/opcertwelcome.aspx>)

The Illinois EPA meets with the Public Water Supply Operator Certification Advisory Board at least two times per year. For meeting times, minutes and agendas see <http://www.epa.illinois.gov/topics/drinking-water/operator-certification/index>. During these meetings, the Advisory Board reviews renewal/examination statistics, reports from the Exam Committee, reciprocity data, application/applicant approval process for testing, and training criteria. At these meetings, the Illinois EPA is also provided direction for Operator Certification Program enhancements.

The Illinois EPA also meets at least annually with the Examination Committee. This Committee is supported by the Environmental Resources Training Center through contractual agreement with the Illinois EPA. In 2015, new examinations for Class A were released with a great deal of resources devoted to the question database. A new exam for Class B was released in May 2017 and new exams for the C and D were released in August 2017. It is important to note that the Environmental Resources Training Center is also the location of one of the state's leading water and waste water training facilities and has been integral in assisting the Illinois EPA in the development of the certified operator database, use of modernized testing software and development of technical assistance documents.

Finally, the Illinois EPA would like to make note of our training partners. The operator training opportunities provided by the Environmental Resources Training Center at Southern Illinois University-Edwardsville, the Illinois Potable Water Supply Operators Association, Illinois Rural Water Association, Illinois Section of the American Water Works Association and two-year colleges are a huge factor in the successful treatment of potable water in Illinois. Whether at large conferences, webinars, semester long classes, regional forums or water system specific curricula these educators, associations and individuals have afforded opportunities to water professionals in Illinois that is unparalleled across the country.

Non-Transient Non-Community Water Supply Operator Certification Program

All major program elements for the NTNC Water Operator Certification Program have been implemented. (As previously described NTNC are PWS serving at least 25 of the same non-residents for 6 months per year.) Currently there are 431 of these systems in Illinois. Over the reporting period, 401 (93.0 percent compliance) of these have properly certified responsible operators. For the 117 NTNC systems that have some type of chlorine disinfection installed, 116 or approximately (99.1 percent) have a certified operator.

Six hundred and twenty-six NTNC water supply operators are currently trained and certified in

Illinois (578 are certified by the Illinois DPH and 48 are certified by the Illinois EPA). Initially, NTNC operators must pass a 12-hour course consisting of eight sections with an exam at the end of the course. Periodically, a review of the course's eight sections is done to evaluate the effectiveness of the training, ensure quality, and compliance with U.S. EPA's guidelines. The eight sections of the course include: 1) workplace safety; 2) source water characteristics; 3) equipment maintenance; 4) sampling requirements and procedures; 5) system disinfection; 6) emergency procedures; 7) administration for water supply operations; and 8) mathematics. Currently, no fewer than two initial courses are held annually allowing systems to maintain operator compliance.

After the initial training, operators must meet training requirements for subsequent certificate renewals. Certification renewals began in the fall of 2005. Illinois DPH phased-in the renewal-training requirement as approximately one-third of the operators renew their expiring certificates each year. All NTNC operators must complete an approved renewal course as a prerequisite for their certificate renewals. Operators who renew are required to submit documentation to the Illinois DPH that they have taken the required training.

Renewal course guidelines were reviewed with several industry-wide water education organizations. After this review was complete, computer based training, meeting renewal-training requirements was chosen as the most effective option available. The Illinois DPH selected the Operator Basics 2005 Program developed by the Montana Water Center in cooperation with U.S. EPA as the renewal course.

In June of each year, operators are sent a letter advising them of their expiring certificates. This letter provides instructions on how to download and complete the course or how to order the CD version from the National Environmental Services Center. As of April 30, 2008, the availability to complete the Operator Basics 2005 Course online was discontinued by the Montana Water Center. The Illinois DPH acquired a supply of CDs from National Environmental Services Center and, in the letters mailed, informed operators a CD could be obtained directly from the Illinois DPH. Feedback on the course remains positive.

In August of each year, all NTNC PWS are sent "Operator Summary" letters informing them of the operators registered with Illinois DPH. These letters notify each system of any operators with expiring certificates and the importance of having a properly certified responsible operator. In 2017, 87 new operators were certified and 93 current operators renewed their certifications.

Non-compliant, NTNC water supplies are immediately advised of the serious nature of not having a properly certified responsible operator and options for achieving compliance. Formal enforcement is evaluated for systems that are significantly non-complaint. Enforcement actions are conducted similar to water quality or monitoring violations. A VN is sent and formal enforcement follows if the water system does not take action. Some LHDs are issuing violations for operator compliance, but the Illinois DPH has not been inputting those in SDWIS/STATE in the last three years due to resource limitations. However, the percentage of supplies achieving compliance is currently 93.0 percent and supplies requiring enforcement action has decreased over time.

U.S. EPA has expressed concern regarding the status of NCPWS that chlorinate and that utilize surface water sources. Only one of these systems (0.9 percent) is currently out of compliance with operator requirements. As discussed above, these systems are contacted immediately by Regional Office or LHD field staff. This approach is limiting any period of non-compliance to a maximum of only a few months. The Illinois DPH believes this relatively high compliance rate is due to increased efforts to contact these systems. The Illinois DPH central office Program staff are monitoring any schools that chlorinate and contacting these systems directly if operator non-compliance persists. **Currently, all schools that chlorinate have a certified operator.** Overall the compliance rate, particularly for chlorinating water systems remains high when staff turnover rate at these facilities is considered. The Illinois DPH will continue with the efforts to keep these compliance rates at current levels.

The Illinois DPH continues to place emphasis on the eight TNC PWS that use surface water as their source. The Illinois DPH will continue providing training to these facilities on a periodic (as needed) basis. Since these systems receive annual sanitary surveys by RO staff, technical assistance opportunities are conducted at least once per year.

The Illinois DPH continues to consult with the Water Quality Association regarding the content of the initial certification course. Illinois DPH is concerned that the Montana 2005 Basics Course is no longer available for download from the Montana web site. This course has been the Illinois DPH standby for operator recertification. This being the case, the Illinois DPH is getting help from technical providers for class room sessions. Rural Community Assistance Program (RCAP) provided two class room recertification courses as an option to the Montana Course in 2016. Illinois DPH will continue to seek help from RCAP and review other options for recertification opportunities.

The number of NTNC PWS on the U.S. EPA ERP non-compliance list continues to remain lower than past totals. This success is, in-part, attributable to the Operator Certification Program providing qualified operators for NCPWS. Further, the Illinois DPH has instructed Regional Office (RO) staff and LHDs to increase efforts to contact systems without a certified operator to keep compliance rates high. Indications are that this strategy is having success. The final compliance rate for 2017 remains at a high level of 93.0 percent.

As mentioned above, the Illinois DPH sends an annual letter to each NTNC PWS with the certification status of all operators on file. The dates of new operator classes are also sent to all NTNC PWS prior to each class. In June of each year, a letter goes out to all certified operators that are due for re-certification by the end of the year. Each time these letters are sent out a list of systems in non-compliance is sent to the ROs and LHDs instructing them to contact these water systems. ROs and LHDs are also instructed to cite operator non-compliance as a significant deficiency in sanitary surveys.

The Illinois DPH still intends to solicit increased stakeholder involvement in the operator certification program. The Illinois DPH would like to convene the stakeholder group when U.S. EPA approves the Illinois DPH State Specific Revised Total Coliform Rule (RTCR) and the formal rule-making process can begin. With respect to the nine baseline standards established by

the U.S. EPA for the operator certification program, the following summarizes the Illinois DPH program status:

- **Authorization** – Illinois DPH implements the Operator Certification Program under the Drinking Water Systems Code (77 Ill. Adm. Code 900.45). The authorization is by Section 9 of the Illinois Groundwater Protection Act, (415 ILCS 55/9).
- **Certification** – Process control/system integrity decisions are made under the supervision of the certified operator.
- **Grandfathered NTNCW Operators** – Grandfathered operators are not allowed. All NTNCPW must have a properly certified operator.
- **Operational Requirements** – The certified operator does not have to be present at each operating shift. However, operations are conducted under the certified operator's direction and oversight.
- **Enforcement** – 77 Ill. Adm. Code 900.45(d) outlines the process to suspend or revoke an operator. Illinois DPH has not suspended or revoked an operator in the recent past.
- **Certification Renewal** – Illinois DPH requires operators to go through the initial certification class if they fail to recertify within 3 years of certification expiration.
- **Resources needed to Implement the Program** – Illinois DPH personnel listed in the overview section above are funded under the PWSS Grant funds. Sufficient recourses have been provided to run an adequate program.
- **Stakeholder Involvement** – Stakeholder involvement in the operator certification program operations and possible revisions will be solicited in the Illinois DPH specific RTCR rule process as indicated above.
- **Program Review** – Illinois DPH reviews all aspects of the operator certification program as needed. In particular, training materials are reviewed as new Primary Drinking Water Standards are revised. Budgeting, staffing and data management are reviewed as needed.

Capacity Development Program

A review of SDWIS/STATE data indicates that 90 new CWS and 133 new NCPWS have been activated since October of 2003 (five and 15, respectively, of which have subsequently become inactive). As described in the *ILLINOIS ANNUAL REPORT ON THE EFFICACY OF CAPACITY DEVELOPMENT, September 30, 2005*, Illinois' program has been implemented in two parts:

- First, all new public water supplies that became active after October 1, 1999, were required to complete a capacity development demonstration. Illinois adopted regulations to implement this requirement. Failure to meet this deadline would have resulted in a loss of up to 20 percent of the State Revolving Loan Fund monies allocated to Illinois each year.
- Second, Illinois was required to develop a Capacity Development Strategy by September 30, 2000. The purpose of this Strategy is to structure a work plan that Illinois will implement to ensure that existing public water supplies have the capacity to achieve compliance, and continue to operate in compliance with all existing and future drinking water program standards and requirements. Failure to meet this deadline would have resulted in a loss of up to 20 percent of the State Revolving Loan Fund monies allocated to Illinois each year. The Illinois Capacity Development Strategy was approved by U.S. EPA on September 27, 2000.

This strategy has proven effective. As documented in Appendix D, none of these new systems have had significant compliance issues even though most would be considered small systems.

The Illinois DPH administers the NCPWS Capacity Development Program (see Appendix E, for a summary of new systems and compliance issues). This program is unique because these systems are not in the business of producing water for resale; therefore, the treatment and monitoring of the water system has not traditionally been a routine function of management. The water supply at these facilities is used for drinking, sanitation and, in some cases, manufacturing processes. Demonstrating capacity for these types of NCPWS is, for the most part, a small part of the overall management, budget and operating plan for a specific PWS. Illinois DPH uses existing field survey and visit opportunities to identify NCPWS which need or may benefit from capacity development assistance. However, Illinois DPH approaches the water supply compliance issues from a somewhat unique perspective of a side benefit activity rather than a primary activity, and must work within the framework of the entire operation to best assist the supply in developing capacity. Central office staff coordinates the dissemination of information and education of NCPWS personnel for all new or amended regulations and requirements. When capacity assistance is needed on-site, central office staff accompanies field staff or LHD staff to provide training or technical assistance. Additionally, central office staff also perform a capacity review on all proposed new NTNC PWS. When capacity assistance is needed on-site, central office staff coordinate with Regional Office or LHD staff to provide training or technical assistance.

Again, the Illinois EPA and DPH would like to make special note of the leadership shown by Illinois associations, education institutions and operator groups in the

In 2017 the Illinois EPA prepared a request for proposal to contract for a service provider to conduct statewide small system capacity development. This request is to be released in 2018.

development of Financial, Managerial and Technical Capacity. The Illinois EPA especially thanks the Illinois Rural Water Association for their partnership. The Illinois Rural Water Association routinely meets with the Illinois EPA to discuss emerging education needs in all three areas of capacity development. Additionally, the Illinois EPA is appreciative of the efforts of the Illinois Section of the American Water Works Association and the Illinois Potable Water Supply Operator's Association. All three Associations, as well as local operator groups, routinely invite Illinois EPA staff to speak at their conferences (four separate multi-day annual conferences between the three Statewide Associations). These collaborations are highly effective in educating water supply officials. Over the reporting period, technical assistance has focused on revision to the Total Coliform Rule, revisions to operator regulations, revisions to state regulations (including, but not limited to Permit Regulations), *Legionella* and micro-biological control, lead in drinking water, water loss accounting, as well as a myriad of other regulatory concerns. Finally, the Illinois EPA expresses thanks to the efforts of the Southern Illinois University-Edwardsville's Environmental Resources Training Center. The Environmental Resources Training Center is unique to Illinois and their collaboration on the Operator Certification Program, including their hands-on operator training program and assistance in operator test preparation, is invaluable to the citizens of Illinois.

The following documentation provides the reporting criteria for the annual State Capacity Development Program Implementation Report as required by U.S. EPA through guidance from Cynthia Dougherty in her June 1, 2005, Memorandum. The Illinois EPA and Illinois DPH anticipate this information fulfills the annual reporting requirements for Illinois' approved strategy.

New Systems Program Annual Reporting Criteria –

- There have been no modifications to Illinois' legal authority to implement New System Programs.⁸
- There have not been any modifications to Illinois' control points.⁹
- The following data summarizes the Annual new system data for the Capacity Development Program.¹⁰

Annual Report on New Systems Capacity Development Program January 1, 2017 – December 31, 2017	
Method(s) used to evaluate and verify program implementation	Construction and Operating Permits
Number of proposed new CWS	1
Number of proposed new Non-Transient Non-Community Water Supplies (NTNC PWS)	2
Number of approved new CWS	11
Number of approved new NTNC PWS	2
Number of new CWS (commenced operation after October 1, 1999)	125
Number of new CWS (commenced operation after October 1, 2003)	85 ¹¹
Number of CWS that commenced operation after October 1, 2003 that have gone inactive	5
Number of new CWS activated since October 1, 2003 considered to be in "significant non-compliance" ¹²	0
Number of new NTNC PWS (commenced operation after October 1, 1999)	177
Number of new NTNC PWS (commenced operation after January 1, 2004)	137 ¹³

⁸ See *ILLINOIS ANNUAL REPORT ON THE EFFICACY OF CAPACITY DEVELOPMENT*, September 30, 2005 at: <http://www.epa.state.il.us/water/field-ops/drinking-water/capacity-development/index.html>. U.S. EPA believes this information will help identify whether States have maintained the necessary authority to implement the new systems program.

⁹ See *ILLINOIS ANNUAL REPORT ON THE EFFICACY OF CAPACITY DEVELOPMENT*, September 30, 2005. Each State's New Systems Program identified a set of Control Points, which is an integrated feature of a State's program. A control point identifies a place where the Primacy Agency (or other unit of government) can exercise its authority to ensure the demonstration of new system capacity. States should provide a discussion or a list that explains the modification(s) of control points for new systems, followed by an explanation of how and why the modification(s) have been identified. The explanation should include how the modification(s) is projected to affect the new systems program.

¹⁰ U.S. EPA believes that compilation of compliance data is intended to identify whether there are noncompliance patterns during the first three years of a new system's operation.

¹¹ U.S. EPA has requested the list provided in Appendix D to this Report.

¹² For the purpose of this report significant noncompliance corresponds to an Enforcement Tracking Tool score greater than or equal to 11.

¹³ U.S. EPA has requested the list provided in Appendix E to this Report.

Number of new NTNC PWS activated since January 1, 2004 considered to in “significant non-compliance”	0
Number of new CWS that are not in compliance, Reason for non-compliance:	0
Number of new NTNC PWS that are not in compliance, (These are mostly Phase II/V and Lead and Copper Rule (LCR) monitoring violations. Owner/Operators are generally new to the Drinking Water Regulations and have difficulty keeping up with the testing schedule and their other job duties.)	34

Existing System Strategy –

- There have been no modifications to Illinois’ existing systems strategy. Both the Illinois EPA and the Illinois DPH utilized existing programs, tools and activities as described in the *ILLINOIS ANNUAL REPORT ON THE EFFICACY OF CAPACITY DEVELOPMENT, September 30, 2005*.
- Illinois has continued to identify systems in need of technical, financial and managerial capacity development, as described in the *ILLINOIS ANNUAL REPORT ON THE EFFICACY OF CAPACITY DEVELOPMENT, September 30, 2005*, and its Attachments 3 and 4.
- During the reporting period, Illinois EPA conducted over 420 Engineering Evaluations (Sanitary Surveys) at CWS and Illinois DPH conducted approximately 215 sanitary surveys at NTNC PWS. Public water system capacity concerns were evaluated during each of these evaluations. The Illinois EPA and DPH find that each system has to be handled on an individual basis and no common trends not previously noted were identified.
- During the reporting period, no revisions or modifications to the implementation strategy for existing system strategy were made.
- The Illinois EPA will continue the current capacity outreach process in Illinois. Generally, groups like the Illinois Rural Water Association, Illinois Section of the American Water Works Association, Illinois Potable Water Supply Operators Association and local operator associations request technical assistance from the Illinois EPA. These requests come in throughout the year and generally focus on areas of concern as they arise or are perceived by the particular interest group. For the Illinois EPA to track this level of detail, we would need to institute a separate tracking system with no purpose other than reporting. At this time, the Illinois EPA-DPWS does not have the resources to institute such a process and is not convinced that doing so would be in the best interest of the State.
- While the Illinois EPA will continue to evaluate the use of various programs to assist CWS in developing capacity, the Illinois EPA will continue to work with the training providers mentioned in the previous bullet on these programs, including the Check Up Program for Small Systems. In the future, Illinois training providers may modify the Check Up Program for Small Systems to accommodate the very small systems that struggle most to achieve compliance.
- The Illinois EPA and the Public Water Supply Operator Advisory Board remain concerned that the technical capacity of water systems will be affected by staff attrition resulting from the aging workforce in Illinois. In light of this impending issue, the Illinois EPA has devoted a large resource investment in working with the Board. This effort has

resulted in the statutory changes described in the Operator Certification Program description within this chapter.

- In previous program reviews, U.S. EPA has noted that Illinois' Capacity Development Program would benefit from an enhancement to address these financial and managerial capacity issues such as promoting more realistic user rates and budget planning for current and long-term needs. While the Illinois EPA agrees with this conceptually, it can be difficult influencing water supplies with respect to financial capacity. Further, very few water systems are subject to statutory rate setting in Illinois (only privately-owned utilities are subject to the Illinois Commerce Commission). Therefore, other than encouraging water systems to act progressively, the Illinois EPA has no authority to require actions beyond our current program.

Cross-Connection Control Program

The DPWS evaluates community water supply cross-connection control programs during routine engineering evaluations of each system. A viable program consists of an ordinance, an ongoing survey of the distribution system service connections, identification of at risk service connections, mitigation of recognized risks via a plumber/CCCDI, and documentation.

In terms of corrective action, if a system does not have an ordinance, has no information on file relative to a survey of its distribution system, cannot produce reports on reduced pressure backflow devices, or cannot show that devices within its facility have been tested annually, it is safe to say that the system does not have an active and effective program. These situations are normally cited in either a NCA letter or a VN to the water supply as violation(s) of 35 Ill. Adm. Code 607.104(a) and (b). While the Illinois EPA does not track VNs to the level of specificity

needed to quantitatively evaluate CWS compliance with this requirement, the Illinois EPA can say that compliance has increase dramatically over the past decade and the program is reaching a level of maturity where almost 100 percent of CWS have ordinances or water use agreements and evaluate high risk activities. The bulk of the noncompliance occurs in tracking routine surveillance of the distribution system. The Illinois EPA believes that these activities are even seeing great improvements.

To verify the effectiveness of each water system's Cross-Connection Control Program the DPWS FOS normally evaluates the following questions:

1. Does the system have a Cross-Connection Control Ordinance?
2. Does the system survey the service connections on its distribution system and at what frequency?
3. Does the system receive reduced pressure backflow preventer annual test reports?
4. Does the system have an adequate tracking procedure whereby test reports and high-risk service connections are tracked?
5. Does the system ensure that devices within its water treatment facility are properly tested on an annual basis?
6. Are there any locations within the water treatment facility that should have backflow protection that do not?

Groundwater and Source Water Protection Program

To highlight the need for frequent source water protection efforts, U.S. EPA has recognized the importance of an ongoing program to protect ground and surface water sources of PWS subject to the regulatory requirements of the SDWA. As such, two national environmental output measures¹⁴ have been established to assist in

The Illinois EPA continues to monitor for Harmful Algal Blooms (HAB) at a subset of PWS intakes as part of the Ambient Lake Monitoring Program. Illinois EPA biologists collect three HAB samples between the months of June and October at each selected CWS intake. Samples collected as part of the HAB monitoring program are sent to the Illinois EPA Division of Laboratories for analysis of total microcystins and cylindrospermopsin by “Enzyme-Linked Immunosorbent Assay” testing methodology.

measuring the effectiveness of state source water protection programs. With assistance of national stakeholder groups, U.S. EPA has established that over the next two-year reporting cycle (Calendar Years 2016 and 2017) state primary enforcement programs should minimize risk to public health through source water protection for 50 percent of CWS (i.e. “minimized risk” achieved by substantial implementation, as determined by the State, of actions in a source water protection strategy). Additionally, risk to public health should be minimized through source water protection for 42 percent of the population served by CWS (i.e. “minimized risk” achieved by substantial implementation, as determined by the state, of actions in a source water protection strategy). For the calendar year 2017, 49.7 percent (871 of 1,749) of CWS have minimized risks to public health through substantial implementation of source water protection programs. Additionally, 72.9 percent (8,778,853 of 12,032,670) of the population served by community water systems have source water that has been substantially protected by their respective water systems.

One joint ICCG/GAC meeting was held during the 2017 reporting period. These meetings included discussions on the review and development of recommendations pertaining to draft updates to the Illinois Groundwater Quality Standards; a pilot real time nitrate monitoring effort being conducted with the U.S. Geological Survey (USGS); and updates on regional water supply planning efforts with the Department of Natural Resources. (See Appendix F and G of this document for a list of publications relevant to ICCG/GAC efforts.)

2017 Priority Regional Groundwater Protection Planning Regions Summary – The Illinois EPA was required to establish a regional groundwater protection planning program. For further detail see: <http://www.epa.illinois.gov/topics/water-quality/groundwater/gw-planning/index>. Since 1991 the Illinois EPA, in cooperation with the Department of Natural Resources (DNR), has designated four priority groundwater protection planning regions. These regional designations took into account the location of recharge areas that were identified and mapped by DNR. Further, the Director of Illinois EPA establishes a regional planning committee for each priority groundwater protection planning region. Each regional planning committee is responsible for the following:

- Identification of and advocacy for region-specific groundwater protection matters;

¹⁴ Strategic Goal 2: Protecting America’s Waters, Strategic Objective 2.1.1: Water Safe to Drink, Grant Code SDW-SP4a and SDW-SP4b.

- Monitoring and reporting the progress made within the region regarding implementation of protection for groundwaters;
- Maintaining a registry of instances where the Illinois EPA has issued an advisory of groundwater contamination hazard within the region;
- Facilitating informational and educational activities relating to groundwater protection within the region; and
- Recommending to the Illinois EPA whether there is a need for regional protection pursuant to regulated recharge area.

Integration of Wellhead Protection Programs has been, and will continue to be, implemented for CWS wells in Priority Groundwater Protection Planning Regions. There are indicators that show CWS groundwater protection progress within the Priority Groundwater Protection Planning Regions. In general, the first step of developing a CWS groundwater protection program involves determining the recharge area for CWS wells in unconfined aquifers utilizing existing aquifer property data. In Illinois, the recharge area is based on a five-year time of travel delineation. The second step involves determining the potential sources, potential routes, and the land use zoning within these recharge areas. The third step involves establishing a local team of stakeholders to develop a groundwater protection strategy, and most importantly, taking the necessary measures to implement these activities to protect groundwater resources. The last step is the development of a local emergency-planning document that addresses: natural disasters, chemical contamination and physical disruptions that threaten the supply and distribution network of the public water supply.

- **Southern Groundwater Committee** – The Southern Groundwater Protection Planning Region is composed of Madison, St. Clair, Monroe and Randolph Counties.
 - Annual Field Day – The 2017 Field Day was held at Southern Illinois University at Edwardsville and concentrated on careers in groundwater water protection. The Committee is planning for the fall 2018 event.
 - Well-Sealing Assistance – In April, the Committee started a well sealing financial assistance program. The program offers up to \$500 to assist with the sealing of private wells. For the past ten years, the committee has offered free bentonite to residents wanting to seal a private well in the 4-county region.
- **Northern Groundwater Committee** – The Northern Region is comprised of Winnebago, Boone and McHenry Counties.
 - Youth Groundwater Festival, Rock Valley College (Winnebago County) – The 23rd annual Youth Groundwater Festival was held March 8, 2017, at Rock Valley College at no charge to the attendees. In attendance were 613 4th and 5th grade students from twelve area schools from Boone and Winnebago counties. Activities included: Groundwater Flow Model, Enviroscope model, Dripial Pursuit, and Water Testing. These presentations enabled students to identify where drinking water comes from, how “above ground” activities impact groundwater, common contaminants in drinking water, a few screening methods for water testing, observations of microorganisms through a microscope, and modern methods of water supply protection. Approximately 140 people volunteered to help and/or financially supported the Youth Groundwater Festival, including members of the Northern Regional Groundwater Committee, teachers and students enrolled in Rock Valley College science classes, various environmental agencies, water departments, and groups

which include: Burpee Museum of Natural History, Boone County Conservation District, Boone County Health Department, Boone County Soil & Water Conservation District, Illinois DPH, Illinois EPA, League of Women Voters of Greater Rockford, Loves Park Water Department., Northern Regional Groundwater Protection Planning Committee, Rock Valley College, McHenry County Health Department, McHenry County School Environmental Education Program, North Park PWD, City of Rockford Water Division, Severson Dells Environmental Center, U of IL Cooperative Extension, WIFR-TV, Winnebago County Health Department, Winnebago County Soil & Water Conservation District.

- Youth Groundwater Festival (McHenry County, Illinois) – Annually, in Spring and Fall, 6th grade students from around McHenry County are invited to participate in the Youth Groundwater Festival Presented by McHenry County Schools Environmental Education Program (MCSEEP) in conjunction with the McHenry County Water Resource Division, the McHenry Department of Health, Environmental Defenders of McHenry County, Woodstock High School, Village of Algonquin Water Resource Management, and the McHenry/Lake County Soil and Water Conservation District. Special sponsorship is provided from the Northern Regional Groundwater Protection Planning Committee (NRGWPPC). The Spring Groundwater Festival was held on May 11, 2017 and the Fall Groundwater Festival was held on September 29, 2017. Each year, approximately 240 students attend the free of charge STEM (Science Technology Engineering and Math) Groundwater Festival held at the Soil and Water Conservation District's (SWCD) Dean Street facility located at the headwaters of the Kishwaukee River. Students move through hands-on education stations addressing topics such as: watching what happens when pollution and rainwater enter the ground beneath your feet using the groundwater model; helping prepare slides of groundwater for examination then determine whether water is safe or not safe for drinking; using a piezometer to measure and track the water level and flow from the springs on site; investigating soil chemistry while learning about how water is naturally cleaned by the soil; and discovering how best mitigate storm water hazards such as flooding and nonpoint source pollution. Finally, students wrap up their day with a fast paced “dripiial pursuit” game competing against other teams to display their knowledge of groundwater.
- Boone County Fair, August 2017 – The Committee participated along with the Boone County Conservation District in Conservation Corner. This year's theme was to promote basic water conservation. The Committee members explained how private and community water wells should conserve their water; test their water, how groundwater can be protected and each separate county health department provided pamphlets about wells, and septic systems.
- County “Unused and Expired Medications Collections” – The Committee continues to help support the cost of the disposal of barrels used to collect inhalers for any of these events. These events are in cooperation with Keep Northern Illinois Beautiful.
- Boone County Field Day 2017 – On April 7, 2017, the Committee participated in the Career Education Association of North Central Illinois (CEANCI) event held

in Rockford. The event was a Round Table Environmental Science and Agriculture event for High School students. Students from Rockford and Belvidere area schools participated. Students rotated from table to table and were allowed to ask career based questions. The committee's presentation included discussion on conservation, water quality and science based careers.

- Well Sealing Program – The Committee continues to work with Winnebago, Boone and McHenry Counties to abandon wells that are no longer used and/or susceptible to groundwater contamination or a hardship case. There were 261 wells abandoned since 2001 and last year two more well was abandoned in McHenry County. The bentonite is sold at cost and the money is used to purchase additional bentonite.
- **Northeastern Groundwater Committee** – The Northeastern Region is composed of Kane, DuPage, Kendall, Will, and Kankakee Counties.
 - Annual Field Day – The field day is typically targets local and regional water operators and local environmental health departments to assist in obtaining professional development credits. The Committee reaches out to the public to provide information on topics related to their use of groundwater. Members of the Committee from DuPage County will plan the event for 2018. Other members may act as speakers (e.g., current rulemaking in Illinois, BMPs). A field trip may be planned by others on the Committee.
 - Well Sealing Assistance – Bentonite is provided to approved individuals with abandoned water wells in the region. Fees for sealing the well can be waived by regional health departments and/or paid by the Committee. The Committee has developed a brochure to promote this activity. This brochure explains well sealing and is distributed at public events; it is also available at the health departments in each county. Brochures are updated/edited on an “as needed” basis. Further, well-sealing demonstrations have been successfully held at locations in the region with more to be planned in the near future. Private citizens, local government representatives, and public health/groundwater protection personnel are targeted to advance hands-on experience in well-sealing efforts.
 - Community Outreach Library & Presentations – Many Committee members participated in regional community outreach by promoting groundwater awareness through the following events:
 - Posting information such as Illinois EPA and committee brochures in public places such as libraries, county & township buildings;
 - Community events such as the Kendall County Natural Resource Tour;
 - County Health Department Well Education efforts in Will, Kendall, Kane, and DuPage Counties;
 - School group meetings in Kankakee, Kane, and Will Counties;
 - Earth Day and Arbor Day celebrations; and
 - Continued updates to a Facebook page for the committee.

The Committee provided its members with groundwater flow models, an Enviroscope, tables, a display board showing an interactive water cycle, and other printed materials. The Committee also purchased various giveaways (recycled pens, pencils, note pads, etc.) to increase the public awareness of our groundwater protection endeavors.

The Committee has also developed a brochure that explains our work and how we can help communities in the region. This brochure is updated on an “as needed” basis and is available at our members, health departments and at public events. The Committee also maintains lending libraries that are regularly updated and available for public use. The libraries include information (publications, videos, books, activities, a display board and groundwater models) for citizens, professionals and educators. Current inventory and the need for additional resources are regularly reviewed. Committee members continuously participate in fairs and events and usually give demonstrations on the groundwater models or the EnviroScape tabletop hydrologic model.

- Snow and Ice Removal Seminar – The Committee co-hosts informational and training seminars for public and commercial applicators of road salt each autumn. Last year’s event was held with the assistance of the Conservation Foundation. The program was expanded and improved over the years to include the science of road salt impacts and hands-on training with salt trucks. Certification in de-icing operations is also provided.
- **Central Groundwater Committee** – The Central Region is composed of Peoria, Tazewell, Mason and Woodford Counties.
 - Clean Water Celebration – This two-day event is the world’s largest clean water festival (in Peoria) and has become a model for other water festivals across the country. It began in 1993. The event is a joint project of the Sun Foundation, Illinois American Water, Central Region Groundwater Protection Committee, and various other community members which encourages students to make a difference in protecting our nation’s most precious natural resource. Admission is free to all, with an estimated 3,000 middle and high school students in attendance. The theme for 2017 was “Prospecting for Water on the Moon”. The keynote speaker was Dr. Jacqueline Quinn, an engineer, inventor and payload manager for the NASA Resource Prospector mission to be launched to the moon as early as 2021. A lander is to release a rover equipped to search for subsurface water, hydrogen and more. The celebration consists of four sections:
 - An exhibitor area that allows organizations and businesses to offer a display on groundwater protection;
 - A section called “Streams” has three divisions: water conservation, water sheds, and water pollution. Each division allows for a 20-minute presentation to students.
 - Breakout sessions that discussed specific water quality issues that teachers could have chosen for their classes to study.
 - A keynote speaker – The Committee also provided students with Central Region Groundwater pencils at the event to answer questions that each exhibitor asks at their booth.
 - Annual Environmental Education Day (Tazewell County Health Department) – Approximately 400 Tazewell County fifth grade students attended the October 5, 2017 event. Stations for student participation included hands on activities such as making edible aquifers and jungles in a jar, recycling relays, etc. Companies represented include Illinois EPA, Forest Park Nature Center, Peoria County Sustainability, Ameren Illinois, Heart of Illinois Bee Keepers, Trees Forever,

Illinois American Water, and U.S. Fish & Wildlife Service. Another Environmental Education Day is scheduled for October 4, 2018.

- Groundwater Awareness Week – March 11-17, 2017. Groundwater is essential to the health and well-being of humanity and the environment. Whether on a public water system or a private well, whether you are a health care official, policymaker, regulator, an environmentalist or a groundwater professional, the Committee is working to get everyone involved in protecting this vital resource. Groundwater Awareness Week (March 11-17, 2017) was promoted on social media. The Committee also purchased nitrate test strips to offer screenings of private well water and free water testing. The week is promoted every year.
- Fix a Leak Week – Household leaks can waste more than 1 trillion gallons of water annually nationwide, so each year residents are encouraged to hunt down the drips during Fix a Leak Week. 2017 Fix a Leak Week was March 20-26. To help consumers save water, the WaterSense program promotes ways to identify and repair dripping faucets, running toilets, and leaky showerheads. In most cases, fixture replacement parts can be installed by do-it-yourselfers and pay for themselves in no time. The Committee posted on social media sites and Fix a Leak Kits were distributed in Peoria, Tazewell, Woodford and Mason County. The event is promoted annually.

Mahomet Aquifer Task Force – The Mahomet Aquifer Protection Task Force was created by Public Act 100-0403 to address the issue of maintaining the clean drinking water of the Mahomet Aquifer. Task Force members are required to conduct a study of the Mahomet Aquifer to:

- Develop a State plan to maintain the groundwater quality of the Mahomet Aquifer;
- Identify potential and current contamination threats to the water quality of the Mahomet Aquifer;
- Identify actions that might be taken to ensure the long-term protection of the Mahomet Aquifer; and
- Make legislative recommendations for future protection of the Mahomet Aquifer.

The Groundwater Section has spent a significant amount of resources providing technical support to the Task Force during 2018 to help them achieve our common objectives. For further detail, see: <http://www.epa.illinois.gov/topics/community-relations/sites/mahomet-aquifer-task-force/index>.

Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA) Sampling at Freeport and Albany – Under Round 3 of the Unregulated Contaminant Monitoring Regulation (UCMR), the U.S. EPA completed sampling for PFOS and PFOA in various States. This sampling in Illinois detected PFOS above the Health Advisory (HA) in Freeport (IL1770200) CWS filter plant or Treatment Plant (TP) 01. One of the samples at TP 01 detected PFOS at 0.18 µg/L, which exceeds U.S. EPA's finalized HA of 0.07 µg/L for PFOS and PFOA.

Albany was not sampled under the UCMR but was sampled for PFOS and PFOA in conjunction with U.S. EPA in 2009 where perfluorochemicals was confirmed in Albany CWS well(s) #1 (WL11893) and #2 (11894) at a concentration of 0.25 µg/L. In a special study conducted with the United States Geological Survey, hexavalent chromium was also found in Albany Well #2 at

2.1 µg/L. PFOS and PFOA have been noted to be associated with plating waste (MPC, 2008). Further, chromium is generated from electroplating (Illinois EPA, 2016).

In follow-up to the recommendations in the HA, the Illinois EPA initiated a special sampling project at Freeport and Albany CWSs. The Illinois EPA first developed a Quality Assurance Project Plan, and then contracted with a commercial laboratory capable of achieving the detection limits. In December 2016, Illinois EPA sampled for PFOS and PFOA. Illinois EPA received the final results from the sampling in January 2017 and March 2, 2017. Based on these sampling results and further analysis, the City of Freeport officials, in consultation with the Illinois EPA, Illinois DPH, and the Agency for Toxic Substances and Disease Registry (ATSDR), notified the public of the actions that were taken in response to the HA exceedance.

In follow-up to the recommendations in the U.S. EPA Health Advisory for PFOS and PFOA and UCMR, the Illinois EPA initiated a special sampling project at Freeport and Albany community water supplies (CWS). Freeport notified all the users of the results and shut down contaminated wells.

Even though the results are only at the non-enforceable advisory level, the City proactively shut down the two wells and one water filtration plant immediately upon notice from the Illinois EPA on February 10, 2017. The city still obtains its drinking water from four other wells that serve two different treatment plants. None of these wells and treatment plants exceeds the Health Advisory limit.

The Albany sampling did not show concentrations of PFOS and PFOA above the HA.

Review and Designation of Class III: Special Resource Groundwater Areas – Under the IPCB’s groundwater quality standards (Part 620), all groundwater in Illinois is organized under a four-tiered resource-based classification system. Class III: Special Resource Groundwater is:

- Demonstrably unique (e.g., irreplaceable sources of groundwater) and suitable for application of a water quality standard more stringent than the otherwise applicable water quality standard; or
- Vital for a particularly sensitive ecological system.

The Illinois EPA has approved the technical adequacy and the IPCB has designated 26 Class III groundwater areas prior to 2017. From 2017 to present the Illinois EPA has approved and the IPCB has designated 6 new Class III areas.

Part 620 contains an expedited review and designation process for groundwater that contributes to a dedicated nature preserve. The Illinois EPA confirms the technical adequacy of a request to designate these Class III areas. The Illinois EPA then prepares a proposal for the IPCB to review and designate after a public review process. The Illinois EPA has approved the technical adequacy and the IPCB has designated 26 Class III groundwater areas prior to 2017. From 2017 to present the Illinois EPA has approved and the IPCB has designated 6 new Class III areas.

Groundwater Management Zone Approvals – A person who has caused, threatened or allowed a release of a contaminant that exceeds the Board’s groundwater quality standards regulations (35 Ill. Adm. Code 620) can come back into compliance by mitigating an impairment to the groundwater under what is referred to as a groundwater management zone (GMZ). The Groundwater Section reviews and approves GMZ’s primarily for the Bureau of Water, but also with the, Bureau of Land, Illinois Emergency Management Agency’s Division of Nuclear Safety, Department of Natural Resources (i.e. Office of Mines and Minerals and Division of Oil and Gas) and in many cases with the Attorney General’ Office.

GMZ proposals that the Illinois EPA reviews include:

- Identification of any contaminants released to groundwater;
- Description of how groundwater has and will be monitored to determine the rate and extent of the release, and if the release has migrated off the facility/site;
- A schedule for investigation of the extent of the release, if it has not already been completed;
- The results of available soil testing and groundwater monitoring associated with investigation of the release, including locations and depths of samples, as well as any monitoring well construction details with well logs; and
- Proposed remedy, including:
 1. A detailed description of all possible remedies considered, the actual remedy selected by person and reasons why that remedy was selected over the others considered.
 2. The results of groundwater contaminant transport modeling or calculations showing how the selected remedy will achieve compliance with the cleanup objective.
 3. A description of the fate and transport of contaminants with the selected remedy over time.
 4. A statement of how groundwater at the facility/site will be monitored following implementation of the remedy to ensure that the cleanup objective has been obtained.

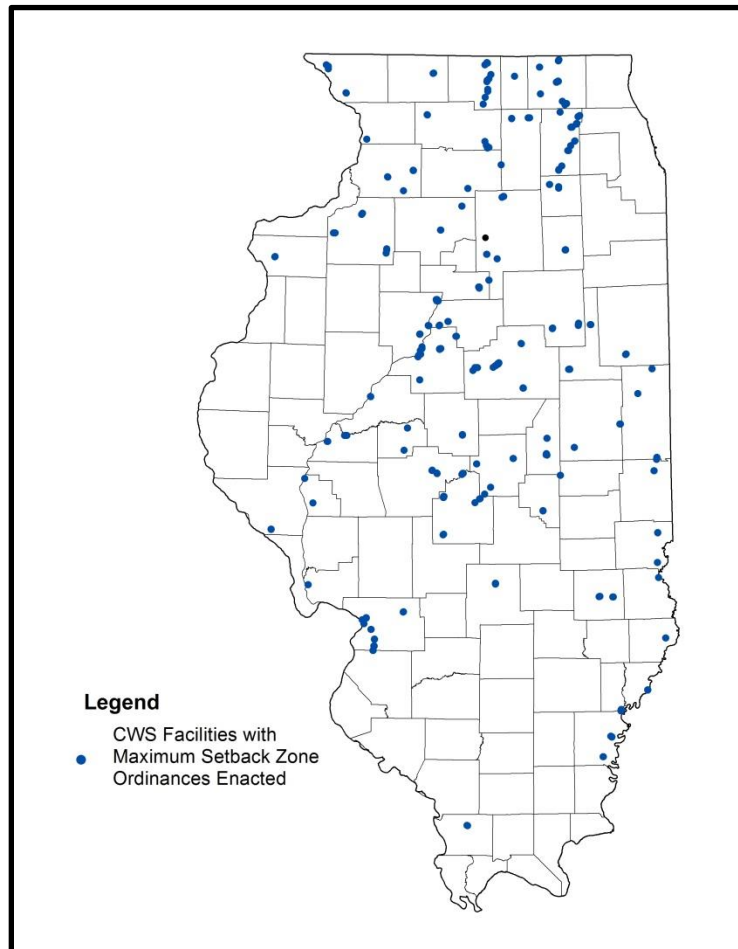
From 2017 to the present the Illinois EPA has reviewed and approved two GMZ’s and is currently negotiating two additional GMZ’s with the Attorney General’s Office (AGO) and parties responsible for groundwater contamination.

Natural Gas Leak Investigation – A well owned by The Peoples Gas Light and Coke Company (“Peoples Gas”), McCord #2 (“MC2”), that was injecting natural gas into the Manlove Natural Gas Storage Field at a depth of 4,000 feet below land surface into the Mt. Simon Aquifer into the Mahomet Dome structure, leaked a natural gas plume of contamination into the overlaying aquifers in the Mahomet Sole Source Aquifer (SSA). The mechanical integrity of the MC#2 well failed and natural gas rose to the surface, and has contaminated some portion of Class I: Potable Resource Groundwater in the SSA and multiple private water supply wells from sampling conducted by Peoples Gas. As a result, the Illinois EPA initiated an investigation to independently sample and assess a sub-set of wells classified by Peoples Gas as: 1) contaminated; 2) sampled but not contaminated; 3) biogenic glacial gas and 4) not contacted in the radial vicinity of the release.

The Illinois EPA contracted with a commercial laboratory capable of conducting isotopic finger printing used to distinguish thermogenic gas. To help accomplish this purpose, Illinois EPA staff worked in conjunction with the Illinois DPH and Champaign County Health Department to sample 29 private drinking water supply wells in proximity to MC#2. The Illinois EPA found six private wells that were contaminated. The case has been referred for enforcement and we are working on development of a GMZ with the AGO, DNR, the Illinois DPH and Peoples Gas.

Maximum Setback Zone Approvals – Under Section 14.3 of the Illinois Environmental Protection Act, counties and municipalities utilizing any community water supply well are authorized to establish a maximum setback zone, up to 1,000 feet, around their well(s). The law established minimum setback zones of either 200 or 400 feet. Establishing Maximum Setback Zones has the following benefits to water supplies:

- Prevention of contamination by siting restrictions up to 1,000 feet;
- Regulation of existing and new potential sources of contamination;
- Provides an awareness of the sensitivity of the zone to contamination problems;
- Proved local control and authority for wellhead protection; and
- Requires the application of the most stringent remedial cleanup objectives within 1,000 feet of a community well.



A total of 121 CWSs (see the map to the right) with a total of 376 active wells have maximum setback zone protection. There were six wells that received technical adequacy for maximum setback zones in 2017. Four of these zones were for additional wells at: Rochelle (1); Rockfalls (1); and Rockton (2) where maximum seatback zones have already been established. Two new maximum setback zones were established for the Lostant CWS.

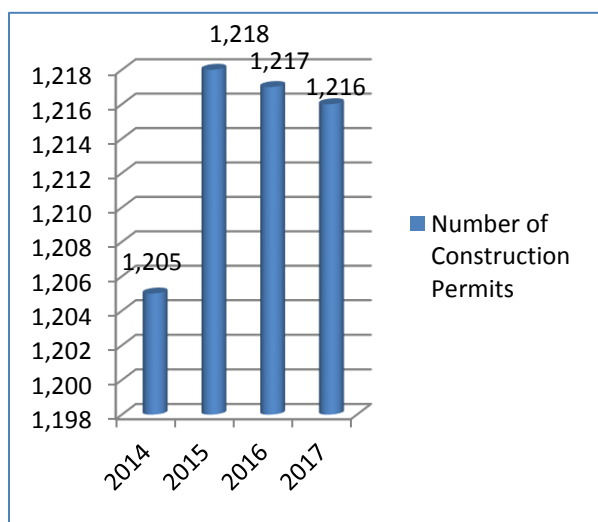
Permitting Program

The following table summarizes the DPWS permit activity for Calendar Year 2017. It is noteworthy that all permits were issued well within statutory deadlines.

Permits Issued by Illinois EPA's Division of Public Water Supplies for CWS						
Permit Types	Deadlines	Public Hearing Required	Public Notice Required	Calendar Year 2017		
				Applications Received	Permits Issued	Approx. Turn-around time (days)
Construction permits	45/90 Days	No	No	1222	1216	23
Operating permits	90 Days	No	No	1008	1058	4
Emergency permits	n/a	No	No	22	28	13
As-built approvals	none	No	No	19	24	19
Aquatic Pesticide/Algaecide	90 Days	No	No	16	16	7

The PS has also taken the following actions in response to the need for enhanced health protection from lead in drinking water:

- The PS now requires three, six-month rounds of initial lead and copper monitoring following an operating permit that involves a change in source or significant change in treatment. This is an increase above the current requirement of two rounds.
- The PS began placing a special condition on all water main replacement permits that require notice to each service connection regarding precautions that can be taken to minimize the effects of “disturbances” to water consumers.
- All new corrosion control evaluations will have enhanced project tracking.



FEDERAL FISCAL YEAR 2018 AND 2019 ILLINOIS EPA WORK PLAN TO FULFILL PRIMARY ENFORCEMENT AUTHORITY FOR THE PUBLIC WATER SYSTEM SUPERVISION (PWSS) PROGRAM¹⁵

U.S. EPA Region 5 provided Public Water Supply Supervision (PWSS) program work plan guidance for the FFY19 grant to the state drinking water directors on April 23, 2018. The format for the annual PWSS workplan currently includes this overall summary that identifies state-specific priorities and core program descriptions.

EPA Strategic Plan – This continuing program grant is consistent with U.S. EPA’s Strategic Plan Goal 2: Clean and Safe Water, which calls for protecting public health by providing safe drinking water. Many of the grant workplan activities contribute to the goal of assuring that people served by public water systems (PWSs) receive drinking water that meets all applicable standards through effective treatment and source water protection. Continuing program implementation includes adopting rules at least as stringent as federal regulations, providing assistance to PWSs on regulatory requirements, conducting sanitary surveys, ensuring that monitoring and follow-up is conducted, and enforcing regulations.

- **Rules and primacy** – Illinois will continue to maintain primacy for, and implement all of the drinking water rules contained in Appendix H. These rules will continue to be administered by the Illinois EPA and DPH.
 - Illinois requested and was granted a 2-year extension, to February 2017, to submit the Revised Total Coliform Rule primacy application.
 - Illinois has not yet completed programming to be able to fully report RTCR violations, including Level 1 and 2 assessment information, to SDWIS/STATE. Non-CWS tracking of RTCR will be evaluated and a plan developed in 2018 to more fully report on this Rule.
 - Illinois will continue to assist U.S. EPA in implementation of the Fourth Unregulated Contaminant Monitoring Rule (UCMR), as described in the U.S. EPA/Illinois EPA Partnership Agreement.
 - U.S. EPA Region 5 will continue to track state reporting of rule violations.
- **Sanitary surveys** – Illinois will continue to maintain a baseline core of individuals with the technical expertise needed to perform sanitary surveys.
 - Illinois will ensure that sanitary surveys are conducted periodically that, at a minimum, meet frequency requirements specified by rule.
 - U.S. EPA Region 5 will track state commitments to conduct sanitary surveys within the federally required intervals.
- **Laboratory certification** – Illinois will continue to provide an adequate laboratory certification program for all regulated contaminants, at a minimum to certify commercial laboratories within the State.
 - Illinois will continue to certify all laboratories that produce results for compliance with SDWA at least once every three years and will meet all regulatory requirements.

¹⁵ Work Plan commitments are negotiated as part of the Illinois EPA/U.S. EPA Performance Partnership Agreement. These agreements cover a two-year time frame that is based on the Federal Fiscal Year beginning in October. Therefore, these agreements overlap with the calendar year being reported on within this report.

- Illinois EPA's Division of Laboratories will maintain a certification program and a certified State Lab for inorganic and organic contaminants of concern.
- Illinois DPH will maintain a certification program and a certified State Lab for bacteriologic contaminants of concern.
- Illinois EPA and DPH will submit annual questionnaires to U.S. EPA Region 5.
- U.S. EPA Region 5 will track state commitments to conduct laboratory certification activities by the Illinois DPH and the Illinois EPA's Division of Laboratories.
- **Compliance and enforcement management** – Illinois EPA and DPH will maintain an adequate enforcement and compliance assistance program. Illinois and U.S. EPA Region 5 will continue to implement data exchange to ensure that enforcement resources are targeted at the right PWSs.
 - Illinois (EPA & DPH) will continue to address all systems not in compliance with state rule and regulation. Specifically, Illinois will address non-compliant PWSs that have a score of 11 or higher on the U.S. EPA's Enforcement Targeting Tool report.
 - As an enforcement option, Illinois will continue to refer noncompliant PWSs to the U.S. EPA Region 5 for follow-up action.
 - Illinois EPA and DPH will continue to keep records relating to enforcement decisions.
 - Illinois EPA and DPH will continue to produce an annual compliance report by July 1 as part of a consolidate report program efficacy.
 - U.S. EPA Region 5 will track state commitments under measure SDWA02 (involving addressing with a formal enforcement action or return to compliance, the number of priority systems equal to the number of its PWSs that have a score of 11 or higher on the July Enforcement Targeting Tool report, and update Illinois quarterly.
- **Data management and reporting** – Illinois EPA and DPH maintain adequate data management systems (and updates it for new rules, and new versions of FedRep) that tracks requirements for all rules, which includes the appropriate combination of hardware, software, and personnel to accurately and within a reasonable timeframe identify the inventories (including routine updates of system information), maintain water quality monitoring information, and track compliance with all M/R, MCL, MRDL, TT, PN, and public information requirements.
 - Illinois EPA and DPH will continue to report to U.S. EPA actions and sample data quarterly and inventory data at least annually in accordance with 40 CFR 142.15.
 - Illinois EPA and DPH utilizes SDWIS/STATE to manage water system compliance with all regulatory compliance concerns.
 - As noted previously, Illinois EPA has not yet completed programming to be able to fully report RTCR violations, including Level 1 and 2 assessment information, to SDWIS/STATE. Non-CWS tracking of RTCR by Illinois DPH will be evaluated and a plan developed in 2017 to more fully report on this Rule.
 - U.S. EPA Region 5 will track quarterly and annual data reporting requirements.
- **Operator certification** – Illinois will continue to maintain regulations for the operation and maintenance of all public water systems by properly certified individuals.

- Illinois will continue to report to U.S. EPA the status of the operator certification program on an annual basis.
- U.S. EPA Region 5 will track completion of this report to avoid a 20 percent withholding of the Illinois Drinking Water Revolving Loan Fund grant should Illinois fail to meet this commitment.
 - During FFY19, the U.S. EPA Region 5 staff plan to evaluate Illinois Operator Certification Programs based upon established baseline standards.
- **Capacity development** – Illinois will continue to work with existing PWSs and require capacity demonstrations for new PWSs to enhance water system technical, managerial, and financial capacity to operate in compliance with federal and state regulations.
 - Illinois EPA and DPH will continue to report to U.S. EPA the status of the Illinois Capacity Development Program on an annual basis.
 - U.S. EPA Region 5 will track completion of this report to avoid a 20 percent withholding of the Illinois Drinking Water Revolving Loan Fund grant should Illinois fail to meet this commitment.
 - U.S. EPA Region 5 staff will continue to work with Illinois to promote proactive efforts that will build water system capacity.
- **Source water assessments and protection** – Illinois will continue to report the number of CWSs with source water protection (SWP) plans and the number of CWSs implementing SWP measures electronically via SDWIS/STATE.
 - Illinois will continue to update source water assessments, as resources allow, and complete source water assessment reports for new public water systems
 - U.S. EPA Region 5 will continue track the Source Water Assessment and Protection Program through SDWIS and other State and Federal Reports.
- **Measures and Indicators** – Illinois will continue to use quantitative measures developed by U.S. EPA Region 5 to regularly assess program performance.
 - Illinois will continue to participate in semi-annual conference calls with U.S. EPA Region 5 to discuss national program measures, Region 5 specific shared goals and special high priority queries.
 - Illinois will continue to provide information regarding lead action level exceedances upon request from U.S. EPA Region 5.
 - U.S. EPA Region 5 will continue to track the status of the Illinois Drinking water program with respect to national program measures, Region 5 specific shared goals and special high priority queries.
 - Public health concerns related to Lead and Copper Rule (LCR) implementation will remain a high priority area of focus.
 - U.S. EPA Region 5 will complete a data and enforcement verification audit report in Calendar Year 2018.
 - Illinois will work toward developing corrective action plans regarding identified items within the Report.

FUTURE DIRECTIONS

Illinois Environmental Protection Agency

Division of Public Water Supplies (DPWS) Manager's Initiatives

The DPWS has completed a comprehensive review of current regulations promulgated by the IPCB and JCAR. This process should culminate with a final IPCB regulatory proposal during 2017 regarding the design, operations and maintenance of community water supplies.

The DPWS will continue to support and review legislative proposals to enhance drinking water protection in Illinois. Additionally, the DPWS will continue to support statutorily established committees, councils and boards. These include, but are not limited to the ICCG, the GAC, four Regional Groundwater Protection Committees and the PWS Operator's Advisory Board.

During 2017, the Illinois EPA will continue to implement the expanded HAB monitoring effort. Additional reservoirs used as PWS sources will be assessed by the Ambient Lake Monitoring Program of the BOW.

Field Operations Section

FOS helps achieve the DPWS key outcome measure of ***percent population served with good quality drinking water from CWS***, in addition to the output measure of ***conduct engineering evaluations every 3 years at CWS***. Attrition has resulted in five staff vacancies. These vacancies include the three regional office managers (a fourth is on temporary assignment to the Permit Section Manager).

2018 Objectives: The FOS will also work to maintain current inspection goals and provide emergency and technical assistance to CWS as necessary. Additionally, FOS will continue to support other BOW and DPWS programs including, but not limited to the Operator Certification, Capacity Development and Cross-Connection Control Programs.

As part of routine engineering evaluations/sanitary surveys of water systems, field engineers will begin initiating a process to verify that the water quality parameter ranges are being met on a daily basis. The Illinois EPA recognizes that water treatment operation is just as important as design when it comes to maintaining water quality. Additionally, inspectors will begin evaluating water service line materials inventories in preparation for revisions to the Lead and Copper Rule and advised by U.S. EPA.

Compliance Assurance Section

The CAS helps achieve the Division's key outcome measure of ***percent population served with good quality drinking water from CWS*** and ***percent of CWS serving good quality drinking water***. The CAS has necessarily used a strategic planning approach for implementation of programs for the past 10 years. This process includes cross-training of all staff for rule implementation and programmatic corrective actions. Additionally, the CAS has assisted the Division Manager since the Cross-Connection Control and Capacity Development Program Coordinator vacancy has existed for an extended time.

2018 Objectives: The CAS will continue integration of the Operator Certification, Capacity Development and Cross-Connection Control Programs into base activities to optimize staff resources. Additionally, CAS is in the process of working with IT staff on several data systems including the operator certification data system, updating a web service to track operator certification status, the transition of the existing state and federal SDWIS to SDWIS Prime (supported by the “cloud”) and local data systems.

In response to the concern for lead in drinking water, the CAS is evaluating processes to:

- Follow up with water supplies on all individual user results above 15 ug/L and encourage either lead service line replacement, replacement of premise plumbing that contains lead, or improved corrosion control treatment at the water treatment plant.
- Explore financing opportunities to encourage lead service line replacement including, but not limited to, replacement of lead service as an eligible expense under the drinking water revolving loan fund.

Permit Section

The PS continues to assist the Division in achieving the key outcome measure of ***percent population served with good quality drinking water from CWS***. Because of the current economic downturn, modernization of the Permit Database and streamlining strategies, the PS has been able to meet current work-loads. This trend seems to be reversing itself and workloads are increasing. In 2018, the PS will likely need to recruit a new engineer to meet statutory requirements and deadlines for construction and operating permit reviews.

2018 Objectives: The PS will continue to evaluate the business processes to further streamline and automate certain functions to maintain current work activities to issue construction and operating permits. Furthermore, they will continue to support other BOW and DPWS programs including, but not limited to the Operator Certification, Capacity Development and Cross-Connection Control Programs.

In response to the concern for lead in drinking water the PS is evaluating processes to:

- Continue a review of corrosion control treatment practices at water systems with highest vulnerability to lead corrosion and with greatest populations served.
- Initiate an audit of lead sampling design (Tier I sites): The Illinois EPA intends to begin a process to audit sites as resources allow. The Illinois EPA is currently considering use of Geographical Information System technology to aid in this process.

Bureau of Water Infrastructure and Financial Assistance Section

Lead Service Line Replacement Priority – The federal Capitalization Grant requires 20 percent (estimated to be approximately \$8,600,000 in FY2019) of the annual grant amount be used to provide additional subsidization for eligible loan recipients in the form of principal forgiveness. Use of the funds and eligibility is determined by each state.

Illinois will provide principal forgiveness towards the public water supplies loan program funded projects directly related to activities that reduce or eliminate lead from potable water by removing and replacing lead service lines, and related equipment and appurtenances that the

Illinois EPA deems a likely source of lead contamination. To qualify, a community water system must document lead service lines are connected to its system. Lead service line replacement principal forgiveness will be available up to a maximum amount of \$2,000,000 for communities with a mean household income less than 70 percent of the State average (\$41,437). For other loan recipients, principal forgiveness will be available up to 50 percent of the initial loan amount up to a maximum amount of \$1,000,000. Total project costs include engineering, administrative, legal, and construction costs. Lead service line replacement principal forgiveness will be available for FY2019 loan recipients until all allotted funds are expended.

Groundwater Section

As with the FOS and PS, the GWS assists the Division in achieving the key outcome measure of *percent population served with good quality drinking water from CWS*, in addition to the output measures associated with *enhancing source water protection programs at CWS*. The GWS continues to use the strategic planning approach for implementation of various program activities. These strategic plans are developed with input from the ICCG, GAC, and priority groundwater protection planning committees. Starting with the *Illinois Groundwater Protection Act Biennial Report* published 1998, the DPWS began setting objectives and implementing tactical plans based on a self-assessment of metrics.

2018 Objectives: The GWS will continue the measured outcome metric of *good quality groundwater*, from previous planning cycles. Further, the Section will continue groundwater monitoring efforts in 2018 with emphasis on assessment of nitrate contamination in groundwater. The GWS will also continue support of BOW programs including, but not limited to the Mine Pollution Control Program and Water Pollution Control Permit Program.

The following groundwater protection efforts initiated in 2017 will continue in 2018 based on the results of the self-assessment and environmental indicators. In some tasks, the priority may be shifted due to funding constraints.

- Interagency Coordinating Committee on Groundwater Operations
 - Continue to review and update the Implementation Plan and Regulatory Agenda.
 - Continue to assist the Groundwater Advisory Council in the review and development of recommendations pertaining to groundwater quality and quantity issues.
 - Continue the policy discussion concerning the integration of wellhead protection areas with Tiered Approach for Corrective Action Objectives.
 - Continue investigation into the ability of Illinois Department of Public Health to track and register groundwater monitoring wells.
 - Initiate educational efforts on addressing and preventing increasing chloride trends.
 - Initiate evaluation of Mahomet Aquifer Task Force recommendations.
 - Initiate evaluation of Per- and Polyfluoralkyl Substances (PFAS).
 - Continue coordinating on regional groundwater quantity planning and climate resiliency.

- Groundwater Advisory Council Operations
 - Conduct policy-related meetings in order to review and make recommendations regarding groundwater issues and policies.
 - Provide input to programs, plans, regulatory proposals, and reports, as appropriate.
- Education Program for Groundwater Protection
 - Conduct source water protection workshops.
 - Integrate groundwater education efforts (including geothermal and closed loop wells) into other state environmental planning and protection programs.
- Groundwater Evaluation Program
 - Continue to conduct basic and applied groundwater research programs that allow decisions to be made on sound scientific principles.
 - Continue to update source water assessment fact sheets with information from Right-to-Know, Groundwater Rule evaluations, and field inspections.
 - Continue ambient groundwater monitoring programs at Illinois EPA and Illinois Department of Agriculture pursuant to the Act, IGPA and State Pesticide Management Plan, respectively.
 - Continue with the pilot assessment of nitrates in groundwater and its impact on surface water in relation to Illinois Nutrient Loss Reduction Strategy and publish a report of research with the USGS in 2019.
 - Publish a Groundwater Quality Report including an emphasis on the Mahomet Aquifer.
- Groundwater Enforcement Cases
 - Provide expertise in groundwater water related enforcement cases.
- Right-to-Know Initiatives
 - Continue efforts of providing notification for potable resource groundwater users threatened by groundwater contamination.
 - Continue efforts of implementing the carcinogenic Volatile Organic Compound Maximum Contaminant Level prevention law.
 - Continue efforts of providing notification for potable resource groundwater users threatened by groundwater contamination.
- Groundwater Quality Regulations
 - Continue with proposed changes to the groundwater quality standards and continue efforts of protecting future beneficial uses of drinking water.
- Wellhead Protection Program
 - Continue to participate in the Board rulemaking process for adopting proposed regulations requiring the development of source water protection planning.
 - Continue to integrate groundwater into watershed plans.
- Regional Groundwater Protection Planning Program
 - Continue to assist and advocate local groundwater protection, education, and marketing.
- Groundwater Technical Review of Bureau of Water Permits
 - Provide input on protective design and appropriate groundwater monitoring systems.
- Groundwater Management Zones – Bureau of Water Permits
 - Review and approve corrective action and closure under a GMZ.

- Non-Community and Private Well Program
 - Continue to implement the Wellhead Protection Program and assist with implementing the technology control and groundwater quality standards regulations.
 - Continue the source water assessments for new non-community public water supplies.
 - Continue GIS coverage for all new non-community public water supplies.
 - Continue certification training of non-transient non-community public water supply operators.
 - Continue to inspect and perform laboratory analyses on water samples collected from non-community public water supplies.
 - Continue to issue permits for the construction, modification or extension of existing non-community public water supplies.
 - Continue the issuance of permits for all types of water wells with the exception of community water supply wells.
 - Continue to update the Illinois Water Well and Pump Installation Codes to reflect new technology, industry, and public health standards.
 - Continue supporting education training sessions for licensed water well and pump installation contractors.
 - Continue the certification and registration of closed loop well contractors.
 - Continue the permitting and inspection of the construction of close loop well systems.
 - Continue supporting education training sessions for licensed water well and pump installation contractors.
 - Continue to conduct training sessions pertaining to both the non-community public water supply and private-water program for local health department and Illinois Department of Public Health water program staff.
 - Continue implementation of Public Notification for Private Water Supply Potential Contamination.
 - Continue implementation of the Safe Drinking Water Information System database for compliance monitoring of non-community public water supplies.

Administrative Support Unit

The role of this small unit cannot be underestimated. The group assists all aspects of the Division. Through attrition, the Division is down to two full time staff. At this time, the Division is unsure how this functionality will continue.

2018 Objectives: The DPWS will have to develop a continuity of operation plan to address what may be a large shortage of administrative support in 2018 and beyond.

Illinois Department of Public Health

The Illinois DPH continues to administer the NCPWS Program, protecting public health of the 485,082 population served by NCPWS. Illinois DPH continues doing program work in the central office with only two full time employees. These employees do Plan Review, Federal Reporting, Compliance Assurance for all Non-Transient Systems with IOCs, VOCs, SOC, Lead

and Copper Rule, Arsenic, Disinfection/ Disinfection Byproducts Rule and Surface Water Rule (T and NT). Additional duties include SDWIS/STATE administration including data migration and compliance decision support checks. These two positions further provide training of Local Health Department staff, adopt new rules and program policies.

2018 Objectives:

Resources: Two vacancies continue to exist in the NCPWS Program. Efforts will continue to be made to fill these vacancies as Division of Environmental Health priorities and funding opportunities allow. The Program was able to get some assistance again in 2017 using contractor help, but the Program cannot be properly administered long-term without filling these two vacancies. This would constitute a fully staffed program under current established positions.

Reporting of Coliform and Nitrate Violations: As noted in on-going discussions with U.S. EPA, reporting of coliform and nitrate violations fell off in 2012 and 2013 due to loss of a staff position. However, some gains were made in 2014 and 2015 with the help of some contractor support and re-prioritization of duties. Efforts to restore contractor help were again successful for 2016 thru 2017 and more gains were made towards closing the gap of complete reporting. In 2016, the upgrade to SDWIS/STATE version 3.33 was completed.

In 2017, the following initiatives were completed: 1. The SDWIS Bridge Module for RTCR and GW Rule compliance determinations was successfully set-up and tested; 2. As mentioned above, contractor help was again obtained; 3. The majority of Illinois private Labs are reporting Nitrate data with Electronic files for SDWIS migration; and 4. the Illinois DPH lab has successfully set-up and ran test files in the lab to state format for migration into SDWIS (unfortunately, the Illinois DPH lab has not been able to provide production files yet)

Program Highlight: Nitrate compliance determinations were completed for 2017. Complete Nitrate violation data will be reported with the 2nd Quarter 2018 federal report. This is a major Program accomplishment! This effort was resource intensive as Program staff had to work closely with RO and LHD staff to track and get 2017 Nitrate results submitted. In addition, the Nitrate monitoring compliance rate is very low – 78.8 percent. This is due in large part to the Illinois DPH lab discontinuing free Nitrate analyses after 2015. Illinois DPH is working with RO's and LHD's to bring these systems into compliance in 2018.

Despite the initiatives completed in 2017, Illinois DPH was unable to perform complete compliance determination in SDWIS and reporting of RTCR and GW Rule violations. In addition to resource limitations, stressors that prevented this work were the major efforts required in getting Nitrate reporting completed and putting RTCR Seasonal Start-up procedures in place and executed. As detailed above, a major effort was required by program staff to work with RO and LHD staff to track and get Nitrate samples submitted and compliance determined. Also, program staff gave a major effort to finalize a seasonal start-up procedure and ensure it was executed in Spring 2018. These efforts detracted from completing 2017 RTCR and GW Rule compliance determination and violation reporting.

2018 Objectives: (Cont'd)

Illinois DPH will make every effort to run RTCR and GW Rule compliance determination in SDWIS/STATE in 2018 so that complete reporting can be achieved. Illinois DPH hopes to accomplish this with the following initiatives: 1. Fully implement SDWIS modules for RTCR and GW Rule which are properly installed and working; 2. Working with the Illinois DPH lab to provide lab to state Coliform files for migration into SDWIS in full production mode; 3. Re-assigning some priorities within Illinois DPH to provide some additional help to program staff; and 4. Illinois DPH will again pursue hiring a part-time contractor experienced with SDWIS.

It should be noted Illinois DPH ROs and LHDs are monitoring for compliance and protecting public health when confirmed Coliform contamination is present at Non-Community Public Water Supplies. Central office program staff have not had the resources over the last six years to run the compliance determination through SDWIS/STATE to verify the work performed in the field and completely report all violations, particularly all monitoring violations.

Revised Total Coliform Rule Adoption: The Illinois DPH is adopting an alternative RTCR for NCPWS in 77 Ill. Adm. Code Part 900 of the Public Health Rules. Illinois DPH is working closely with U.S. EPA Region 5 program staff on this proposed rule. This rule is more stringent than the federal rule and makes more efficient use of State and LHD resources. Along with rule adoption, program policies and reporting forms are being revised and updated to provide more consistency in the NCPWS Program. Illinois DPH has made changes to the draft rule requested by Region 5 and has submitted Special Primacy Requirements to Region 5 as requested via letter dated February 19, 2016. Illinois DPH continues awaiting approval of these Special Primacy Requirements to begin the formal rule-making process of adopting the alternative RTCR for NCPWS. As of April 1, 2016, Illinois NCPWS are subject to the federal RTCR as adopted in 35 Ill. Adm. Code 611 of the Illinois Pollution Control Board Rules until the Part 900 rules are adopted.

Lead and Copper Rule: The Illinois DPH conducts a thorough review of sample results at NTNC PWS with special emphasis on schools and daycares. The Illinois DPH reviewed and revised sample site selection criteria and sampling protocol in 2016. These documents were revised based on sampling protocol recommendations from U.S. EPA following Flint and ensure sample site locations represent the highest level of health protection based on the criteria of human consumption and “worst case” risk for lead leaching. Illinois DPH included these documents in a quarterly sample schedule letter sent to all NTNC PWS in June 2016 and requested that all systems re-submit a sample site plan prior to their next Lead/Copper sampling event. This was fully implemented in 2017 and all Lead and Copper sampling are now conducted following the revised sample site collection criteria and sampling protocol.

Illinois DPH has a lead role in implementing the new Lead Mitigation in Schools Law. Illinois DPH is required to receive and review all the Lead data that is submitted by Illinois schools. Consequently, numerous man hours were required by the Non-Community Program staff in response to inquiries about the law and implementation issues. The NCPWS Program staff's experience and knowledge with the LCR were needed for these tasks. Unfortunately, the numerous hours spent on this new law by NCPWS staff contributed to delays in providing Lead Action Level updates to U.S. EPA in 2016 and 2017. Every effort will be made to eliminate these delays in 2018.

Appendix A
Illinois EPA Annual Compliance Report
Calendar Year 2017
SDWA Contaminant Listing

Community Water Supplies

Contaminant Code	Contaminant	Rule Family	Violation Category	# of Violations	# of Resolved Violations	# of CWS in Violation
3014	E. COLI	GWR	Monitoring and Reporting	1	1	1
1005	Arsenic	IOC	Maximum Contaminant Level Violation	17	0	5
1005	Arsenic	IOC	Monitoring and Reporting	1	0	1
1040	Nitrate	IOC	Maximum Contaminant Level Violation	4	3	2
1040	Nitrate	IOC	Monitoring and Reporting	7	1	6
5000	Lead and Copper Rule	LCR	Monitoring and Reporting	82	38	77
5000	Lead and Copper Rule	LCR	Treatment Technique Violation	7	5	5
4000	Gross Alpha, Excl. Radon and U	Rads	Maximum Contaminant Level Violation	2	0	1
4010	Combined Radium (-226 and -228)	Rads	Maximum Contaminant Level Violation	16	0	6
4010	Combined Radium (-226 and -228)	Rads	Monitoring and Reporting	5	1	5
4006	Combined Uranium	Rads	Monitoring and Reporting	2	2	2

Contaminant Code	Contaminant	Rule Family	Violation Category	# of Violations	# of Resolved Violations	# of CWS in Violation
0999	Chlorine	St2 DBP	Monitoring and Reporting	34	31	33
1006	Chloramine	St2 DBP	Monitoring and Reporting	1	1	1
1009	Chlorite	St2 DBP	Monitoring and Reporting	2	2	1
2456	Total Haloacetic Acids (HAA5)	St2 DBP	Maximum Contaminant Level Violation	4	3	2
2456	Total Haloacetic Acids (HAA5)	St2 DBP	Monitoring and Reporting	25	2	25
2950	TTHM	St2 DBP	Maximum Contaminant Level Violation	16	6	8
2950	TTHM	St2 DBP	Monitoring and Reporting	25	2	25
2920	Total Organic Carbon	St1 DBP	Treatment Technique Violation	9	6	9
0300	IESWTR	SWTRules	Treatment Technique Violation	2	2	1
0300	IESWTR	SWTRules	Monitoring and Reporting	1	1	1
0800	LT2ESWTR	SWTRules	Treatment Technique Violation	1	1	1
8000	Coliform (RTCR)	Revised Total Coliform Rule	Maximum Contaminant Level Violation	1	0	1
8000	Coliform (RTCR)	Revised Total Coliform Rule	Monitoring and Reporting	29	27	28

Contaminant Code	Contaminant	Rule Family	Violation Category	# of Violations	# of Resolved Violations	# of CWS in Violation
8000	Coliform (RTCR)	Revised Total Coliform Rule	Public Notification	3	3	3
7500	Public Notice (PN)	PN	Consumer Awareness	11	11	11
7000	Consumer Confidence Report	CCR	Consumer Awareness	45	44	45
2105	2,4-D	SOC	Monitoring and Reporting	1	0	1
2050	Atrazine	SOC	Maximum Contaminant Level Violation	1	0	1

*Illinois DPH Annual Compliance Report
Calendar Year 2017
Summary NCPWS*

Volatile Organic Chemicals (VOCs)								
			MCLs			Monitoring		
Code	Name	MCL (mg/l)	# of Violations	# of RTC Violations	# of PWSs In Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
2977	1,1-Dichloroethylene	0.007	0	0	0	66	13	56
2981	1,1,1-Trichloroethane	0.2	0	0	0	66	13	56
2985	1,1,2-Trichloroethane	0.005	0	0	0	66	13	56
2980	1,2-Dichloroethane	0.005	0	0	0	66	13	56
2983	1,2-Dichloropropane	0.005	0	0	0	66	13	56
2378	1,2,4-Trichlorobenzene	0.07	0	0	0	66	13	56
2990	Benzene	0.005	0	0	0	66	13	56
2982	Carbon Tetrachloride	0.005	0	0	0	66	13	56
2380	Cis-1,2-Dichloroethylene	0.07	0	0	0	66	13	56
2964	Dichloromethane (Methylene Chloride)	0.005	0	0	0	66	13	56
2992	Ethylbenzene	0.7	0	0	0	66	13	56
2989	Monochlorobenzene (Chlorobenzene)	0.1	0	0	0	66	13	56
2968	o-Dichlorobenzene	0.6	0	0	0	66	13	56
2969	p-Dichlorobenzene	0.075	0	0	0	66	13	56
2996	Styrene	0.1	0	0	0	66	13	56
2987	Tetrachloroethylene	0.005	0	0	0	66	13	56
2991	Toluene	1	0	0	0	66	13	56
2979	Trans-1,2-Dichloroethylene	0.1	0	0	0	66	13	56
2984	Trichloroethylene	0.005	0	0	0	66	13	56
2955	Xylenes, Total	10	0	0	0	66	13	56
2976	Vinyl Chloride	0.002	0	0	0	66	13	56
VOC Totals			0	0	0	1,386	273	56

Synthetic Organic Chemicals (SOCs)								
Code	Name	MCL (mg/l)	MCLs			Monitoring		
			# of Violations	# of RTC Violations	# of PWSs In Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
2931	1,2 Dibromo-3-Chloropropane (DBCP)	0.0002	0	0	0	18	12	10
2105	2,4-D	0.07	0	0	0	18	12	10
2063	2,3,7,8-TCDD (Dioxin)	3x10-8	-	-	-	-	-	-
2110	2,4,5-TP (Silvex)	0.05	0	0	0	18	12	10
2051	Alachlor (Lasso)	0.002	0	0	0	18	12	10
2047	Aldicarb	NA	-	-	-	-	-	-
2044	Aldicarb Sulfone	NA	-	-	-	-	-	-
2043	Aldicarb Sulfoxide	NA	-	-	-	-	-	-
2050	Atrazine	0.003	0	0	0	18	12	10
2306	Benzo (A) Pyrene	0.0002	0	0	0	8	3	4
2010	BHC-gamma (Lindane)	0.0002	0	0	0	18	12	10
2046	Carbofuran	0.04	0	0	0	18	12	10
2959	Chlordane	0.002	0	0	0	18	12	10
2031	Dalapon	0.2	0	0	0	8	3	4
2035	Di(2-Ethylhexyl) Adipate	0.4	0	0	0	8	3	4
2039	Di(2-Ethylhexyl) Phthalate	0.006	0	0	0	12	3	5
2041	Dinoseb	0.007	0	0	0	8	3	4
2032	Diquat	0.02	0	0	0	8	3	4
2033	Endothall	0.1	0	0	0	8	3	4
2005	Endrin	0.002	0	0	0	8	3	4
2946	Ethylene Dibromide (EDB)	0.00005	0	0	0	12	12	10
2034	Glyphosate	0.7	0	0	0	8	3	4
2065	Heptachlor	0.0004	0	0	0	18	12	10
2067	Heptachlor Epoxide	0.0002	0	0	0	18	12	10
2274	Hexachlorobenzene (HCB)	0.001	0	0	0	8	3	4
2042	Hexachlorocyclopentadiene	0.05	0	0	0	8	3	4
2015	Methoxychlor	0.04	0	0	0	18	12	10
2036	Oxamyl (Vydate)	0.2	0	0	0	8	3	4
2326	Pentachlorophenol	0.001	0	0	0	18	12	10
2040	Picloram	0.5	0	0	0	8	3	4
SOCs (cont'd)								

			MCLs			Monitoring		
Code	Name	MCL (mg/l)	# of Violations	# of RTC Violations	# of PWSs In Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
2037	Simazine	0.004	0	0	0	8	3	4
2383	Total Polychlorinated Biphenyls (PCB)	0.0005	0	0	0	18	12	10
2020	Toxaphene	0.003	0	0	0	18	12	10
SOC Totals			0	0	0	386	222	10
			Treatment Technique			Monitoring		
Code	Name	MCL (mg/l)	# of Violations	# of RTC Violations	# of PWSs In Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
2257	Epichlorohydrin	TT	-	-	-	-	-	-
2265	Acrylamide	TT	-	-	-	-	-	-
Totals			-	-	-	-	-	-

Groundwater Rule (GWR)							
Violation Type (code)	Violation Name	# of Violations		# of RTC Violations	# of PWSs In Violation		
31 (0700) & 19 (3002, 3014, 3028)	Monitoring of Treatment (Major Monitoring)	0		0	0		
34 (3014)	Monitoring of Source (Major Monitoring)	0		0	0		
41 (0700)	Failure to Maintain Microbial Treatment - TT	0		0	0		
42 (0700)	Failure to Provide Treatment -TT	0		0	0		
45, 48 (0700)	Failure to Address Deficiency – TT	0		0	0		
		Monitoring			Treatment Technique		
		# of Violations	# of RTC Violations	# of PWSs In Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
GWR Totals		0*	0*	0*	0*	0*	

Inorganic Chemicals (IOCs)		
	MCLs	Monitoring

Code	Name	MCL (mg/l)	# of Violations	# of RTC Violations	# of PWSs In Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
1074	Antimony, Total	0.006	0	0	0	2	1	2
1005	Arsenic	0.01	7	5	3	14	5	12
1010	Barium	2	0	0	0	2	1	2
1075	Beryllium, Total	0.004	0	0	0	2	1	2
1015	Cadmium	0.005	0	0	0	2	1	2
1020	Chromium	0.1	0	0	0	2	1	2
1024	Cyanide	0.2	0	0	0	2	1	2
1025	Fluoride	4	-	-	-	-	-	-
1035	Mercury	0.002	0	0	0	2	1	2
1040	Nitrate	10	3	0	3	853	0	797
1038	Total Nitrite & Nitrate	10	0	0	0	0	0	0
1041	Nitrite	1	6	0	6	0	0	0
1045	Selenium	0.05	0	0	0	2	1	2
1085	Thallium, Total	0.002	0	0	0	2	1	2
1094	Asbestos	7 MFL	-	-	-	-	-	-
IOC Totals			16	5	12	885	14	811

Coliform (TCR)							
Violation Type	Violation Name	# of Violations		# of RTC Violations	# of PWSs In Violation		
1A	MCL, Ecoli	11*		1*	11*		
21	MCL, Acute	NA		NA	NA		
22	MCL, Monthly	NA		NA	NA		
23, 25	Monitoring Routine & Repeat Major	NA		NA	NA		
3A	Monitoring, Major	42*		24*	42*		
		MCLs			Monitoring		
		# of Violations	# of RTC Violations	# of PWSs In Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
TCR Totals		11*	1*	11*	42*	24*	42*

Lead and Copper Rule (LCR)							
Violation Type	Violation Name	# of Violations		# of RTC Violations	# of PWSs In Violation		
51	Monitoring, Initial Tap Sampling for Pb/Cu	4		1	3		
52	Monitoring, Follow-up & Routine Tap Sampling for Pb/Cu	69		4	65		
58	Treatment Installation	0		0	0		
65	Public Education	0		0	0		
		Monitoring			Treatment Technique		
		# of Violations	# of RTC Violations	# of PWSs In Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
LCR Totals		73	5	68	-	-	-

Surface Water Treatment Rules (SWTR)									
Violation Type	Contam Code	Violation Name	# of Violations	# of RTC Violations	# of PWSs In Violation				
41 SWTR	0200	SWTR Treatment Technique, Filtered	0	0	0				
42 SWTR	0200	SWTR Treatment Technique, Unfiltered	0	0	0				
31 and 36	0200	SWTR Major Monitoring, (M/R)	0	0	0				
03 SWTR	0100	Turbidity Monitoring/Reporting	0	0	0				
32 LT2	0800,3025 3014,3015	Monitoring, (M/R)	0	0	0				
32 Turbidity	0100	Monitoring, (M/R)	0	0	0				
33 LT2	0800	LT2 Reporting	0	0	0				
37 IESWTR	0300	IESWTR Treatment Technique Failure to Profile	0	0	0				
41, 42, 45 LT2	0800	LT2 Treatment Technique	0	0	0				
43, 44, and 47 IESWTR	0300	IESWTR Treatment Technique	1	1	1				
29 and 38 IESWTR	0300	IESWTR Major Monitoring	0	0	0				
09 IESWTR	0300	IESWTR Record Keeping	0	0	0				
	MCLs			Monitoring			Treatment Technique		
	# of Violations	# of RTC Violations	# of PWSs In Violation	# of Violations	# of RTC Violations	# of PWSs In Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
SWTR/IESWTR Total	0	0	0	0	0	0	1	1	1

Consumer Notification

Violation Type	Violation Name			# of Violations		# of RTC Violations		# of PWSs In Violation***		
75	Public Notice Rule Reporting			0		0		0		
Stage 1 Disinfectants and Disinfection Byproducts Rule (Stage 1 DBPR)										
Violation Type	Contam Code	Violation Name			# of Violations		# of RTC Violations		# of PWSs In Violation	
12 and 37	0400	Qualified Operator Failure or Failure to Profile/Consult TT			0		0		0	
46	2920	Inadequate DBP Precursor Removal Treatment Technique			0		0		0	
02	1011	Bromate MCL			0		0		0	
02	1009	Chlorite MCL			0		0		0	
02	2456	Total Haloacetic Acids (HAA) MCL			0		0		0	
02	2950	Total Trihalomethanes (TTHM) MCL			0		0		0	
11	0999	Chlorine Maximum Residual Disinfectant Level (MRDL)			0		0		0	
11	1006	Chloramine MRDL			0		0		0	
11	1008	Chlorine Dioxide MRDL			0		0		0	
11	1008	Chlorine Dioxide Monitoring			0		0		0	
13	1008	Chlorine Dioxide MRDL Acute			0		0		0	
27	0400	No DBPR Monitoring Plan			0		0		0	
27	0999	Chlorine Monitoring			0		0		0	
27	1004	Bromide Monitoring			0		0		0	
27	1006	Chloramine Residual Monitoring			0		0		0	
27	1008	Chlorine Dioxide Residual Monitoring			0		0		0	
27	1009	Chlorite Monitoring			0		0		0	
27	1011	Bromate Monitoring			0		0		0	
27	2456	Total Haloacetic Acids (HAA) Monitoring			12		4		11	
27	2920	TOC Monitoring			0		0		0	
27	2950	Total Trihalomethanes (TTHM) Monitoring			12		4		11	
		MCLs/MRDL			Monitoring			Treatment Technique		
		# of Violations	# of RTC Violations	# of PWSs In Violation	# of Violations	# of RTC Violations	# of PWSs In Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
Stage 1 DBPR Totals		0	0	0	24	8	11	0	0	0

2017 State Summary – Non-Community Water Supplies (NCPWS)										
Rule Group	Chemical Sub-Group	MCLs			Monitoring/Notification			Treatment Technique		
		# of Violations	# of RTC Violations	# of PWSs In Violation	# of Violations	# of RTC Violations	# of PWSs In Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
CHEM	VOC	0	0	0	1,386	273	56			
	SOC	0	0	0	386	222	10			
	IOC	8	5	4	885	14	811			
CHEM Subtotal		16	5	12	2,657	509	870			
TCR Subtotal		11	1	11	42*	24*	42*			
Stage 1 DBPR Subtotal		0	0	0	24	8	11	0	0	0
All SWTRs Subtotal					0	0	0	1	1	1
LCR Subtotal					73	5	68	0	0	0
GWR					0	0	0	0	0	0
Consumer Notification Subtotal					-	-	-			
TOTAL		27	6	23	2,796**	546**	928**	1	1	1
Total Number of NCPWSs				Grand Total Number NCPWS Violations (MCL, Monitoring, and Treatment Technique)			Grand Total of NCPWSs in Violation (MCL, Monitoring, and Treatment Technique)			
3,768				2,824**			952***			

* These figures have not been verified with Local Health Department staff that have direct oversight for these water systems.

** This data is incomplete at this time.

*** Public notice for monitoring violations is not included in the compliance rate.

Appendix B
Illinois EPA 2017 Annual Compliance Report
Maximum Contaminant Level and Treatment Technique Violations by CWS
Sort by Contaminant

Contaminant Name	PWS ID	Community Water System Name	Violation Category	Comment
Arsenic	IL0195925	TRIANGLE MHP	MCL	Under Enforcement
Arsenic	IL0195945	FOUNTAIN VALLEY MHP	MCL	Under Enforcement
Arsenic	IL0450100	CHRISMAN	MCL	Under Enforcement
Arsenic	IL0735280	LYNWOOD 3RD ADDITION	MCL	Under Enforcement
Arsenic	IL1070050	ATLANTA	MCL	Under Enforcement
Atrazine	IL0670250	CARTHAGE	MCL	Under Enforcement
Combined Radium (-226 and -228)	IL0110100	BUDA	MCL	Under Enforcement
Combined Radium (-226 and -228)	IL0150300	SHANNON	MCL	Under Enforcement
Combined Radium (-226 and -228)	IL0930150	OSWEGO	MCL	Under Enforcement
Combined Radium (-226 and -228)	IL0935150	FOX LAWN HOMEOWNERS WATER ASSOCIATION	MCL	Under Enforcement
Combined Radium (-226 and -228)	IL1450050	CUTLER	MCL	Under Enforcement
Combined Radium (-226 and -228)	IL1610100	CARBON CLIFF	MCL	Under Enforcement
Gross Alpha	IL0150300	SHANNON	MCL	Under Enforcement
Interim Enhanced Surface Water Treatment Rule	IL0670450	LAHARPE	TT	Under Enforcement
Interim Enhanced Surface Water Treatment Rule	IL0670450	LAHARPE	TT	Returned to Compliance
Lead and Copper Rule	IL1430500	MAPLETON	TT	Returned to Compliance
Lead and Copper Rule	IL1630070	CONCORDIA WATER COOPERATIVE	TT	Returned to Compliance
Lead and Copper Rule	IL1635300	FSH WATER COMMISSION	TT	Returned to Compliance
Long Term 2 Enhanced Surface Water Treatment Rule	IL1570250	EVANSVILLE	TT	Returned to Compliance
Nitrate	IL1075145	MORNINGSIDE MOBILE ESTATES MHP	MCL	Returned to Compliance
Nitrate	IL1075145	MORNINGSIDE MOBILE ESTATES MHP	MCL	Under Enforcement
Nitrate	IL1330200	MAEYSTOWN	MCL	Returned to Compliance
Revised Total Coliform Rule	IL1135385	COUNTRY LANE MHP	MCL	Under Enforcement

Contaminant Name	PWS ID	Community Water System Name	Violation Category	Comment
Total Haloacetic Acids (HAA5)	IL0610150	GREENFIELD	MCL	Under Enforcement
Total Haloacetic Acids (HAA5)	IL1570600	SPARTA	MCL	Returned to Compliance
Total Organic Carbon	IL0610150	GREENFIELD	TT	Under Enforcement
Total Organic Carbon	IL1170060	SOUTH PALMYRA WATER COMMISSION	TT	Returned to Compliance
Total Organic Carbon	IL1170600	MODESTO	TT	Returned to Compliance
Total Organic Carbon	IL1170800	PALMYRA	TT	Returned to Compliance
Total Organic Carbon	IL1171050	STAUNTON	TT	Returned to Compliance
Total Organic Carbon	IL1175150	PALMYRA-MODESTO WATER COMMISSION	TT	Returned to Compliance
Total Organic Carbon	IL1570010	EGYPTIAN WATER COMPANY	TT	Under Enforcement
Total Organic Carbon	IL1570600	SPARTA	TT	Under Enforcement
TTHM	IL0190060	SEYMOUR WATER DISTRICT	MCL	Returned to Compliance
TTHM	IL0350150	NEOGA	MCL	Returned to Compliance
TTHM	IL0990200	GRAND RIDGE	MCL	Returned to Compliance
TTHM	IL0990300	LA SALLE	MCL	Under Enforcement
TTHM	IL1090010	NEW SALEM PWD	MCL	Under Enforcement
TTHM	IL1195110	HOLIDAY SHORES SD	MCL	Under Enforcement
TTHM	IL1710250	MANCHESTER	MCL	Under Enforcement
TTHM	IL1815550	SHAWNEE VALLEY PWD	MCL	Returned to Compliance

Illinois DPH 2017 Annual Compliance Report
Maximum Contaminant Level and Treatment Technique Violations by NCPWS
Sort by Contaminant

ID	Non Community Water Supply Name	Contaminant Name	Violation Category	Comment
IL3133694	PRINCETON CHRISTIAN ACADEMY	ARSENIC	MCL, AVERAGE	Returned to Compliance
IL3133694	PRINCETON CHRISTIAN ACADEMY	ARSENIC	MCL, AVERAGE	Returned to Compliance
IL3133694	PRINCETON CHRISTIAN ACADEMY	ARSENIC	MCL, AVERAGE	Returned to Compliance
IL3147652	CORNERSTONE CHRISTIAN ACADEMY	ARSENIC	MCL, AVERAGE	Returned to Compliance
IL3147652	CORNERSTONE CHRISTIAN ACADEMY	ARSENIC	MCL, AVERAGE	Returned to Compliance
IL3155085	WE CARE DAYCARE	ARSENIC	MCL, AVERAGE	no SOX
IL3155085	WE CARE DAYCARE	ARSENIC	MCL, AVERAGE	no SOX
IL3051649	LAKESHORE GOLF COURSE	E. COLI	MCL, E. COLI, POS E COLI (RTCR)	no SOX
IL3094672	MURPHYS PARKSIDE CAMPGROUND	E. COLI	MCL, E. COLI, POS E COLI (RTCR)	no SOX
IL3105916	MANOR MOTEL	E. COLI	MCL, E. COLI, POS E COLI (RTCR)	no SOX
IL3122283	CLINTON MARINA	E. COLI	MCL, E. COLI, POS E COLI (RTCR)	no SOX
IL3131615	FULTON COUNTY CAMPING CARETAKER	E. COLI	MCL, E. COLI, POS E COLI (RTCR)	no SOX
IL3136226	PEKIN PAINTBALL PARK	E. COLI	MCL, E. COLI, POS E COLI (RTCR)	no SOX
IL3138420	COUGAR CAMPGROUND	E. COLI	MCL, E. COLI, POS E COLI (RTCR)	no SOX
IL3125807	FRYES	E. COLI	MCL, E. COLI, POS E COLI (RTCR)	no SOX
IL3100248	BUSSE 1079	E. COLI	MCL, E. COLI, POS E COLI (RTCR)	Returned to Compliance
IL3069518	LINNE WOODS HP2104	E. COLI	MCL, E. COLI, POS E COLI (RTCR)	no SOX
IL3025866	TERRIS POUR HOUSE	E. COLI	MCL, E. COLI, POS E COLI (RTCR)	no SOX

IL3128579	CHUCKSTOP	NITRATE	MCL, SINGLE SAMPLE	no SOX
IL3110486	MIDWAY TAP	NITRATE	MCL, SINGLE SAMPLE	no SOX
IL3140384	RAILSIDE BAR AND GRILL	NITRATE	MCL, SINGLE SAMPLE	no SOX
IL3048595	BEULAH PRESBYTERIAN CHURCH	NITRITE	MCL, SINGLE SAMPLE	no SOX
IL3117317	EXPRESS LANE GAS AND FOOD MART	NITRITE	MCL, SINGLE SAMPLE	no SOX
IL3013573	LA VIGNA	NITRITE	MCL, SINGLE SAMPLE	no SOX
IL3152983	MONROE CENTER OASIS	NITRITE	MCL, SINGLE SAMPLE	no SOX
IL3017228	MOTOSPORTS PARK	NITRITE	MCL, SINGLE SAMPLE	no SOX
IL3131599	TOWN PLAZA GAS	NITRITE	MCL, SINGLE SAMPLE	no SOX
IL3132183	LYONDELL	IESWTR	TREATMENT TECHNIQUE	Returned to Compliance

Appendix C
Illinois EPA 2017 Annual Compliance Report
Maximum Contaminant Level and Treatment Technique Violations
Sort by CWS

PWS ID	Community Water System Name	Contaminant Name	Violation Category	Comment
IL0110100	BUDA	Combined Radium (-226 and -228)	MCL	Under Enforcement
IL0150300	SHANNON	Gross Alpha	MCL	Under Enforcement
IL0150300	SHANNON	Combined Radium (-226 and -228)	MCL	Under Enforcement
IL0190060	SEYMOUR WATER DISTRICT	TTHM	MCL	Returned to Compliance
IL0195925	TRIANGLE MHP	Arsenic	MCL	Under Enforcement
IL0195945	FOUNTAIN VALLEY MHP	Arsenic	MCL	Under Enforcement
IL0350150	NEOGA	TTHM	MCL	Returned to Compliance
IL0450100	CHRISMAN	Arsenic	MCL	Under Enforcement
IL0610150	GREENFIELD	Total Organic Carbon	TT	Under Enforcement
IL0610150	GREENFIELD	Total Haloacetic Acids (HAA5)	MCL	Under Enforcement
IL0670250	CARTHAGE	Atrazine	MCL	Under Enforcement
IL0670450	LAHARPE	Interim Enhanced Surface Water Treatment Rule	TT	Returned to Compliance
IL0670450	LAHARPE	Interim Enhanced Surface Water Treatment Rule	TT	Under Enforcement
IL0735280	LYNWOOD 3RD ADDITION	Arsenic	MCL	Under Enforcement
IL0930150	OSWEGO	Combined Radium (-226 and -228)	MCL	Under Enforcement
IL0935150	FOX LAWN HOMEOWNERS WATER ASSOCIATION	Combined Radium (-226 and -228)	MCL	Under Enforcement

PWS ID	Community Water System Name	Contaminant Name	Violation Category	Comment
IL0990200	GRAND RIDGE	TTHM	MCL	Returned to Compliance
IL0990300	LA SALLE	TTHM	MCL	Under Enforcement
IL1070050	ATLANTA	Arsenic	MCL	Under Enforcement
IL1075145	MORNINGSIDE MOBILE ESTATES MHP	Nitrate	MCL	Returned to Compliance
IL1075145	MORNINGSIDE MOBILE ESTATES MHP	Nitrate	MCL	Under Enforcement
IL1090010	NEW SALEM PWD	TTHM	MCL	Under Enforcement
IL1135385	COUNTRY LANE MHP	Revised Total Coliform Rule	MCL	Under Enforcement
IL1170060	SOUTH PALMYRA WATER COMMISSION	Total Organic Carbon	TT	Returned to Compliance
IL1170600	MODESTO	Total Organic Carbon	TT	Returned to Compliance
IL1170800	PALMYRA	Total Organic Carbon	TT	Returned to Compliance
IL1171050	STAUNTON	Total Organic Carbon	TT	Returned to Compliance
IL1175150	PALMYRA-MODESTO WATER COMMISSION	Total Organic Carbon	TT	Returned to Compliance
IL1195110	HOLIDAY SHORES SD	TTHM	MCL	Under Enforcement
IL1330200	MAEYSTOWN	Nitrate	MCL	Returned to Compliance
IL1430500	MAPLETON	Lead and Copper Rule	TT	Returned to Compliance
IL1450050	CUTLER	Combined Radium (-226 and -228)	MCL	Under Enforcement
IL1570010	EGYPTIAN WATER COMPANY	Total Organic Carbon	TT	Under Enforcement
IL1570250	EVANSVILLE	Long Term 2 Enhanced Surface Water Treatment Rule	TT	Returned to Compliance
IL1570600	SPARTA	Total Haloacetic Acids (HAA5)	MCL	Returned to Compliance
IL1570600	SPARTA	Total Organic Carbon	TT	Under Enforcement

PWS ID	Community Water System Name	Contaminant Name	Violation Category	Comment
IL1610100	CARBON CLIFF	Combined Radium (-226 and -228)	MCL	Under Enforcement
IL1630070	CONCORDIA WATER COOPERATIVE	Lead and Copper Rule	TT	Returned to Compliance
IL1635300	FSH WATER COMMISSION	Lead and Copper Rule	TT	Returned to Compliance
IL1710250	MANCHESTER	TTHM	MCL	Under Enforcement
IL1815550	SHAWNEE VALLEY PWD	TTHM	MCL	Returned to Compliance

Appendix D
Community Public Water Supply Facilities
Activated Between October 1, 2003 and December 31, 2017

Facility Number	Facility Name	Status A=Active P=Proposed	Status Date	Capacity Demonstration Notes/ Approval Date	ETT Score
IL0015500	IL VETERANS HOME (QUINCY)	A	4/12/2016	formerly exempt - existed prior to 1999 - no SEP required	0
IL0070060	GREENVIEW ESTATES MHP	A	9/8//2014	status change - system was active (exempt) prior to 10/1/1999	0
IL0070200	POPLAR GROVE WELL 7 SERVICE AREA	P	1/24/2006	(no permit info available)	
IL0070350	POPLAR GROVE WEST-COUNTRYSIDE	A	10/1/2004	status change - system was active (exempt) prior to 10/1/1999	0
IL0170010	CASS RURAL WATER DISTRICT	A	5/1/2008	8/12/2004	0
IL0170080	ARENZVILLE RURAL WATER COOPERATIVE	A	3/2/2011	2/16/2007	0
IL0190660	MAPLEWOOD MAC LLC	A	3/7/2017	formerly exempt - existed prior to 1999 - no SEP required	0
IL0195350	ILUR PORTFOLIOS - CARRIAGE ESTATES LLC	A	1/1/2016	formerly exempt - existed prior to 1999 - no SEP required	0
IL0195360	ILUR WOODS EDGE MHP LLC	A	12/7/2016	formerly exempt - existed prior to 1999 - no SEP required	0
IL0195370	ILUR PORTFOLIO 5 - WILSON MHP LLC	A	12/7/2016	formerly exempt - existed prior to 1999 - no SEP required	0
IL0195380	ILUR PORTFOLIO 5 - TRAILSIDE MHP LLC	A	12/7/2016	formerly exempt - existed prior to 1999 - no SEP required	0
IL0195390	ILUR PORTFOLIO 5- SURBANA ESTATES MHP LLC	A	12/7/2016	formerly exempt - existed prior to 1999 - no SEP required	0
IL0195400	ILUR LIBERTY COMMONS MHP LLC	A	12/7/2016	formerly exempt - existed prior to 1999 - no SEP required	0
IL0210030	SHARPSBURG AND NEIGHBORING AREA WATER SY	A	4/13/2011	6/23/2011	0
IL0270040	GATEWAY REGIONAL WATER COMPANY	A	5/10/2007	5/11/2004	0

Facility Number	Facility Name	Status A=Active P=Proposed	Status Date	Capacity Demonstration Notes/ Approval Date	ETT Score
IL0310010	PARADISE MHP	A	1/5/2017	formerly exempt - existed prior to 1999 - no SEP required	0
IL0310200	WOODS OF SOUTH BARRINGTON	A	7/26/2007	7/29/2005	0
IL0310230	MID-MARK WATER COMMISSION	A	1/13/2011	Discovered System-system was active prior to 10/1/1999	0
IL0310370	LINDENTREE TOWNHOMES	A	12/1/2005	10/24/2003	0
IL0311540	LA GRANGE ESTATES MHP	A	7/6/2006	Discovered System-system was active prior to 10/1/1999	0
IL0311900	OAK LANE MHC	A	02/02/2016	formerly exempt - existed prior to 1999 - no SEP required	0
IL0311960	MORTON GROVE - NILES WATER COMMISSION	P	05/16/2017	11/1/2017	
IL0312050	AQUA ILLINOIS-SUMMERDALE	A	11/19/2015	status change - system was active (exempt) prior to 10/1/1999	0
IL0312433	LARAMIE PARK HOMEOWNER ASSOCIATION	P	10/1/2004	status change - system was active (exempt) prior to 10/1/1999	
IL0312540	GRANDBRIAR OF PROSPECT HEIGHTS	A	5/23/2017	3/4/2016	0
IL0312800	WEATHERSTONE LAKES MHP - SAUK TRAIL, LLC	A	11/22/2016	formerly exempt - existed prior to 1999 - no SEP required	0
IL0315125	ALPINE VILLAGE MHP	A	1/6/2017	formerly exempt - existed prior to 1999 - no SEP required	0
IL0315617	EDWARD HINES JR V A HOSPITAL	A	5/17/2007	status change - system was active (exempt) prior to 10/1/1999	0
IL0315850	STERLING ESTATES MHP	A	7/1/2005	status change - system was active (exempt) prior to 10/1/1999	0
IL0350100	JEWETT	A	12/1/2003	status change - system was active (exempt) prior to 10/1/1999	0
IL0374860	SANDWICH ESTATES MHP	A	8/3/2011	status change - system was active (exempt) prior to 10/1/1999	0

Facility Number	Facility Name	Status A=Active P=Proposed	Status Date	Capacity Demonstration Notes/ Approval Date	ETT Score
IL0374865	TRIANGLE MANUFACTURED HOME COMMUNITY	A	8/18/2011	Discovered System- system was active prior to 10/1/1999	0
IL0375500	NORTHERN ILLINOIS UNIVERSITY-DEKALB	A	11/24/2004	status change - system was active (exempt) prior to 10/1/1999	0
IL0495400	EASY BREEZE MANUFACTURED HOME PARK	A	5/4/2012	system existed prior to 10/1/1999 but not regulated until 2012	0
IL0510020	KASKASKIA SPRINGS WTER CO.	P	4/21/2009	4/22/2010	
IL0530260	PAXTON MHP LLC	A	12/7/2016	formerly exempt - existed prior to 1999 - no SEP required	0
IL0570150	BANNER	P	2/10/2014	Permit Denied, No appeal	
IL0578020	BERNADOTTE TOWNSHIP	P	8/5/2009	8/31/2009	
IL0630070	BURT ESTATES MHC	A	2/2/2016	formerly exempt - existed prior to 1999 - no SEP required	0
IL0750910	SUGAR CREEK MANUFACTURED HOME COMM., LLC	A	11/15/2006	Discovered System- system was active prior to 10/1/1999	0
IL0775160	CRAB ORCHARD LAKE MHC	A	9/14/2017	formerly exempt - existed prior to 1999 - no SEP required	0
IL0810030	MOORES PRAIRIE TOWNSHIP WATER COMPANY	A	5/9/2013	2/23/2012	0
IL0890160	PINGREE GROVE	A	10/6/2005	8/18/2004	0
IL0894400	WILLOW LAKE ESTATES MHP	A	7/1/2015	status change - system was active (exempt) prior to 10/1/1999	0
IL0930300	HIGHGROVE CONSERVATION DEVELOPMENT	P	6/5/2006	5/28/2008	
IL0970240	BLUFF LAKE LODGES, INC.	A	12/21/2017	formerly exempt - existed prior to 1999 - no SEP required	0
IL0970330	ARBORIA OF LONG GROVE SENIOR CARE	A	7/25/2017	3/5/2016	0
IL0970340	LONG GROVE	P	11/2/2015	4/15/2016	
IL0971200	PRAIRIE TRAILS OF LONG GROVE	A	2/18/2004	status change - system was active (exempt) prior to 10/1/1999	0

Facility Number	Facility Name	Status A=Active P=Proposed	Status Date	Capacity Demonstration Notes/ Approval Date	ETT Score
IL0975040	AQUA ILLINOIS-HAWTHORN WOODS	A	1/1/2005	1/15/2004	0
IL0975070	AQUA ILLINOIS-RAVENNA	A	8/24/2006	7/27/2004	0
IL0975090	SEDGEBROOK INC	P	6/21/2004	status change - system was active (exempt) prior to 10/1/1999	
IL0990560	MENDOTA MOBILE HOME COMMUNITY	A	5/1/2006	Discovered System-system was active prior to 10/1/1999	0
IL0995329	LA SALLE COUNTY NURSING HOME	A	8/30/2017	Went inactive briefly due to tornado – reactivated following repairs	0
IL0995750	WEST WALNUT TRAILER COURT	A	6/9/2011	status change - system was active (exempt) prior to 10/1/1999	0
IL0995840	SHERIDAN CRCTL CNTR	A	10/15/2003	status change - system was active (exempt) prior to 10/1/1999	0
IL1030350	SAUK VALLEY STUDENT HOUSING	I	9/28/2005	Facility closed – 5/15/2016	0
IL1050500	DANA/LONG POINT, READING, ANCONA RWD	I	01/04/2016	Purchased by IAWC – Streator – 6/1/2009	0
IL1050650	IL AMERICAN-SAUNEMIN	A	9/1/2004	status change - system was active (exempt) prior to 10/1/1999	0
IL1090020	SCIOTA	A	11/1/2003	status change - system was active (exempt) prior to 10/1/1999	0
IL1090030	WEST PRAIRIE WATER CO-OP	A	8/22/2007	status change - system was active (exempt) prior to 10/1/1999	0
IL1110070	SPRING GROVE	P	9/23/2005	11/15/2005	
IL1110130	WOODS CREEK WATER SUPPLY	I	11/30/2005	7/22/2003	0
IL1110930	MEADOWS OF WEST BAY WATER TREATMENT	I	10/19/2007	9/15/2005	0
IL1130210	BLM GW MHP, LLC	A	3/7/2017	formerly exempt - existed prior to 1999 - no SEP required	0
IL1135130	WILLOW CREEK NORTH MHP	A	8/23/2006	Discovered System-system was active prior to 10/1/1999	0
IL1150020	BOODY COMMUNITY WATER COMPANY	A	10/23/2006	8/24/2005	0

Facility Number	Facility Name	Status A=Active P=Proposed	Status Date	Capacity Demonstration Notes/ Approval Date	ETT Score
IL1170060	SOUTH PALMYRA WATER COMMISSION	A	12/19/2003	status change - system was active (exempt) prior to 10/1/1999	0
IL1190260	UNIVERSITY FLATS MHP	A	3/23/2017	formerly exempt - existed prior to 1999 - no SEP required	0
IL1195160	ENCHANTED VILLAGE	A	6/15/2015	status change - system was active (exempt) prior to 10/1/1999	0
IL1195180	OAK GROVE MHP - MADISON COUNTY	A	12/6/2016	formerly exempt - existed prior to 1999 - no SEP required	
IL1235125	AUTUMN RIDGE ESTATES	A	3/29/2007	status change - system was active (exempt) prior to 10/1/1999	0
IL1270200	GALLAGHER SUBDIVISION	P	6/19/2012	not active	
IL1375050	NORTH MORGAN WATER COOP	A	11/1/2007	10/14/2005	0
IL1430080	BUFFALO HOLLOW FARMS WATER ASSOC	A	9/7/2004	status change - system was active (exempt) prior to 10/1/1999	0
IL1590200	OLNEY	A	4/3/2008	status change - system was active (exempt) prior to 10/1/1999	0
IL1610350	MISSISSIPPI MANUFACTURED HOME COMMUNITY	A	5/29/2014	status change - system was active (exempt) prior to 10/1/1999	0
IL1615540	TENNANTS SHADY OAKS SUBDIVISION	A	10/1/2012	system existed prior to 10/1/1999 but not regulated until 2012	0
IL1630070	CONCORDIA WATER COOPERATIVE	P	12/20/2011	2/3/2012	0
IL1670060	OAKWOOD ESTATES	A	8/20/2014	status change - system was active (exempt) prior to 10/1/1999	0
IL1670080	SOUTH SANGAMON WATER COMMISSION	A	5/10/2012	12/23/2010	0
IL1670090	ROUND PRAIRIE WATER COOP	A	10/8/2013	7/28/2011	0
IL1670100	WOODSIDE MHC	I	1/22/2013	status change - system returned to exempt 6/24/2015	0
IL1670110	PARK RIDGE MHC	A	1/22/2013	status change - system was active (exempt) prior to 10/1/1999	0

Facility Number	Facility Name	Status A=Active P=Proposed	Status Date	Capacity Demonstration Notes/ Approval Date	ETT Score
IL1670120	BISSELL VILLAGE MHC	A	2/11/2013	1/11/2013	0
IL1670130	NORTHBROOK MHC	A	2/11/2013	1/11/2013	0
IL1670140	EDGEWOOD MOBILE HOME COURT (MHC)	A	6/28/2013	status change - system was active (exempt) prior to 10/1/1999	0
IL1670160	RIDGE VILLAGE MHP	A	9/24/2013	status change - system was active (exempt) prior to 10/1/1999	0
IL1670170	MILTON MANOR MHP	A	4/30/2014	status change - system was active (exempt) prior to 10/1/1999	0
IL1670180	LINDEN MANOR MHP	A	4/30/2014	status change - system was active (exempt) prior to 10/1/1999	0
IL1670190	WESTWOOD	A	10/10/2014	status change - system was active (exempt) prior to 10/1/1999	0
IL1670210	WESTWOOD PLACE	A	10/10/2014	status change - system was active (exempt) prior to 10/1/1999	0
IL1670220	GASLITE COURT MHC	A	9/17/2015	status change - system was active (exempt) prior to 10/1/1999	0
IL1670230	EJ WATER - SANGCHRIS SERVICE AREA	A	1/10/2017	4/27/2016	0
IL1670240	DEERWOOD ESTATES	A	9/29/2016	formerly exempt - existed prior to 1999 - no SEP required	0
IL1690020	DHS RUSHVILLE TREATMENT AND DETENTION	A	8/31/2009	status change - system was active (exempt) prior to 10/1/1999	0
IL1710020	SCOTT COUNTY RURAL WATER CO-OP	A	7/24/2008	6/10/2002	0
IL1970130	GODLEY PUBLIC WATER DISTRICT	A	5/5/2004	8/26/2011	0
IL1975225	IMPERIAL MHC	A	2/2/2016	formerly exempt - existed prior to 1999 - no SEP required	0
IL2010030	FOREST VIEW MHP	A	6/1/2005	formerly exempt - existed prior to 1999 - no SEP required	0
IL2010080	AQUA ILLINOIS- SHERIDAN GROVE	A	5/4/2005	9/19/2007	0
IL2010460	SOUTH BLUFF MHP	A	7/15/2015	formerly exempt - existed prior to 1999 - no SEP required	0

Appendix E
Non-Transient Non-Community Water Supplies
Activated between January 1, 2004 and December 31, 2017

Facility #	Facility Name	Facility Status A=Active I=Inactive	Activation Date	ETT Score
IL3147652	Cornerstone Christian Academy	A	2-24-04	42
IL3147660	Springhaven Park	I	3-1-04	
IL3147728	American Precision Electronics	A	3-10-04	
IL3147801	All State West Plaza	A	3-25-04	
IL3147900	Barbara Rose Elementary School	A	6-10-04	
IL3148270	Ag View FS Inc.	A	10-14-05	2
IL3148361	Will County Forest Preserve Op & Maint.	I	10-18-04	
IL3148430	Rankin School Dist	A	9-7-04	
IL3148619	North Boone High School (09-27-04)	A	1-4-05	
IL3148742	Barrington Methodist Church	A	3-29-05	
IL3149005	TOYAL AMERICA	A	3-15-05	
IL3149039	Monsanto Agronomy Center	A	6-6-05	
IL3149088	QTC Development, Inc	A	6-7-05	1
IL3149252	Countryside Private School	A	10-3-05	4
IL3149427	Mobil Truck Stop	A	10-4-05	
IL3149443	Wilton Federated Church	A – Changed to Transient System	10-4-05	
IL3149559	Citgo Refinery North Well	A	8-2-06	
IL3149591	Plainfield Township	A – Changed to Transient System	1-23-06	
IL3149807	Flower Garden Toddler Center	I	2-1-06	
IL3149849	Walco Tool and Engineering	A – Changed to Transient System	2-15-06	
IL3150052	Toolamation	A	4-21-06	
IL3150102	Forming America Ltd.	A	4-25-06	
IL3150169	Merichkas	A	5-11-06	
IL3150433	Crest Foods Production	A	11-2-06	
IL3150441	Crest Foods Warehouse	A	11-2-06	
IL3150548	Monsanto Seeds	A	11-2-06	
IL3150581	Victory Christian Center	A-Changed to Transient System	1-24-07	
IL3150748	Seward Screw Products 16377	A	3-7-07	
IL3150763	Illinois Crime Lab	I	3-7-07	
IL3139337	Superior Felt	I	8-13-07	
IL3151654	Monsanto Corn Research	A	1-9-08	
IL3151670	Pioneer Hi-Bred Intl. Corn Research	A	3-4-08	
IL3151944	Freemont Intermediate School	A	4-2-08	
IL3152173	Sav A Pet	A	5-14-08	3
IL3152223	Apachi Day Camp	A-Changed to Transient System	5-1-08	
IL3152462	Danisco	A	10-1-08	
IL3152504	Monsanto Office	A	10-1-08	
IL3152629	Patriot Renewable Fuels	A	12-17-08	
IL3152645	Monsanto Barn	A	5-8-08	
IL3152744	Mary Sears Child Care	I	11-13-14	

Facility #	Facility Name	Facility Status A=Active I=Inactive	Activation Date	ETT Score
IL3152835	West Hills Shopping Center	A	9-18-08	
IL3152850	Deans Food Company	A	12-29-08	
IL3153015	Chemtool Rockton	A	3-12-09	
IL3153023	Pentecostal Center	I	12-17-08	
IL3153064	Menards	A	2-3-09	
IL3153072	Jewel Wells Spring Grove	A	3-31-09	
IL3153080	Pioneer Hi-bred Int.	A	3-31-09	
IL3153213	Little Bit Country Preschool	A – Changed to Transient System	6-25-09	
IL3153239	ROSENBERG CAR DEALERSHIP	A	3-30-15	
IL3153288	Cross Roads Community Church	A – Changed to Transient System	6-25-09	
IL3153346	Scott Company Hyponex	A	6-25-09	
IL3153411	Vermilion Power Station	I	9-17-09	
IL3153569	Rovanco Piping System Inc.	A	9-25-09	
IL3153890	Curry Ice & Coal	I	12-30-09	
IL3153924	Hanson Pressure Pipe West Well	I	6-3-09	
IL3154047	Full Fill Industries	A	2-16-10	
IL3154153	CORNERSTONE EARLY LEARNING	I	1-25-10	
IL3154161	HELMAR LUTHERAN CHURCH	A – Changed to Transient System	3-20-12	
IL3154476	Open Bible Church	I	3-30-10	
IL3154724	Lifes Little Miracles	A	4-13-10	
IL3154567	Moore Tires Inc.	A	4-26-10	
IL3154633	Lutheran General Hospital	A	6-24-10	1
IL3154666	Monroe Center School 2 nd Well	A	6-24-10	4
IL3155028	MASJID AL HUDA SCHOOL	I	6-20-17	
IL3155085	We Care Daycare	A	1-3-11	5
IL3147736	Flower Garden Day Care 3 rd Buliding	A	2-9-11	
IL3148429	MONTESSORI ACADEMY GLEN ELLYN	A	2-10-11	
IL3151365	Children of Promise	A	2-10-10	4
IL3155382	SEPTRAN INC	A	2-24-11	
IL3155168	SAUBER MFG CO 11 BAY	I	3-15-11	
IL3155150	SAUBER MFG CO SUPER SHOP	A	3-15-11	
IL3155390	PEACEFUL PATHWAYS	A	4-3-11	
IL3155416	FOX METRO WATER RECLAMATION DISTRICT	A	4-19-11	
IL3155358	SUNSET FOODS VILLAGE OF LONG GROVE	A	5-17-11	
IL3155291	H B FULLER	A	5-26-11	5
IL3155309	NORTHSHORE UNIVERSITY HEALTH SYSTEM	A	6-28-11	
IL3155606	UIC MEDICAL CENTER CHICAGO	A	8-31-11	1
IL3155614	HEARTLAND PRIVATE SCHOOL	A	9-21-11	1
IL3155747	NORTHFIELD BLOCK COMPANY 1	A	9-29-11	
IL3155754	NORTHFIELD BLOCK COMPANY 2	A	9-29-11	

Facility #	Facility Name	Facility Status A=Active I=Inactive	Activation Date	ETT Score
IL3155762	NORTHFIELD BLOCK COMPANY 3	A	09-29-11	
IL3155796	AMERICAN AD BAG	A	10-12-11	
IL3155804	MARION JOY REHAB HOSPITAL	A	01-10-12	8
IL3155952	CHRIST COMMUNITY CHURCH	A	01-10-12	
IL3155986	KOLB-LENA CHEESE COMPANY	A	01-10-12	6
IL3156323	TRINITY COMMONS	A – Changed to Transient System	04-02-12	
IL3156471	PCS PHOSPHATE	A	06-26-12	4
IL3156554	QUENTIN ROAD BIBLE BAPTIST SCHOOL	A	07-17-12	
IL3156646	WONDERS OF CHILDREN DAYCARE	A	08-02-12	
IL3156695	NACHUSA LUTHERAN HOME	A	09-13-12	
IL3156737	ILLINOIS MARINE TOWING INC	A	09-13-12	
IL3156760	PRECISION PLANTING	A	09-17-12	
IL3156836	JW MARRIOTT HOTEL	A	11-12-12	
IL3156943	COUNTRYSIDE CENTER HANDICAPPED	A	12-31-12	
IL3156950	WHOLE FOODS MARKET WELL	A	12-31-12	
IL3157149	JX PETERBUILT	A	04-02-13	
IL3157164	AUX SABLE MORRIS	A	04-02-13	
IL3157289	RIVER TERRACE CHURCH	A	05-13-13	
IL3157297	BERNER FOOD & BEV	A	05-15-13	
IL3157347	PREMIER FABRICATION	A	06-04-13	
IL3157412	RINKS HOLDING LLC	A	07-15-13	
IL3157479	TUGRANT DIVERSIFIED BRANDS	A	09-24-13	
IL3157487	NORTHSHORE UNIVERSITY GLENVIEW	A	10-2-13	
IL3157586	TECHNISAND WEDRON	A	10-9-13	
IL3157594	WEDRON SILCA 2	A	10-9-13	
IL3157636	MYCOGEN SEEDS GRAND RIDGE	I	05-03-18	
IL3157677	NUSSBAUM TRANSPORTATION	A	10-24-13	4
IL3157990	AZZ GALVANIZING	A	12-05-13	
IL3157933	PEARL VALLEY EGGS	A	12-26-13	
IL3157974	CITY OF ROCHELLE AIRPORT	A	12-26-13	
IL3158444	CANTIGNY PARK	A	9-3-14	
IL3158519	NATURE SCHOLARS DAYCARE	A	9-30-14	
IL3158600	INTEGRYS GAS 2 ND WELL	A	10-8-14	
IL3158717	ALLOY SPECIALTIES INC	A	12-26-14	
IL3158774	MACLEAN FOGG	A	1-15-15	
IL3158873	WEDRON SILICA SCREENING HOUSE	A	2-17-15	
IL3158881	WEDRON SILICA MINE SITE	A	2-17-15	
IL3158923	KSI CONVEYORS INC	A	3-4-15	
IL3158774	MACLEAN FOGG M1	A	01/15/2015	
IL3158873	WEDRON SILICA SCREEN HOUSE	A	2-17-15	
IL3158881	WEDRON SILICA MINE SITE	A	2-17-15	
IL3158923	KSI CONVEYORS INC	A	3-3-15	
IL3158956	J M HUBER WELL 1	A	4-9-15	

Facility #	Facility Name	Facility Status A=Active I=Inactive	Activation Date	ETT Score
IL3159053	FAITH CHRISTIAN ELEM SCHOOL	A	4-9-15	
IL3159061	CELANESE	A –Changed to Transient	4-9-15	
IL3159418	PRIMROSE SCHOOL/DAYCARE	A	6-17-15	
IL3159459	J M HUBER WELL 2	A	6-30-15	
IL3159582	DURA BAR METAL SERVICES	A	8-25-15	
IL3159780	Winnebago Co. Rock 59	A	1-14-16	1
IL3159806	SWENSON SPREADER LLC	A	1-14-16	
IL3159889	ARNTZEN CORPORATION	A	2-18-16	1
IL3159897	DUPONT PIONEER	A	3-08-16	
IL3161240	Capt. James A Lovell FHCC	A	11-14-17	

Appendix F
United States Geological Survey Research Reports

Gahala, A.M., 2017, Hydrogeology and water quality of sand and gravel aquifers in McHenry County, Illinois, 2009-14, and comparison to conditions in 1979: U.S. Geological Survey Scientific Investigations Report 2017-5112, 91p., <https://doi.org/10.3133/sir20175112>

Gahala, A.M., 2018, Hydrologic influences on water levels at Three Oaks Recreations Area, Crystal Lake, Illinois, 4/14/2016-5/27/2016: U.S. Geological Survey Scientific Investigations Report (in review).

Kay, R.T., Gahala, A.M., and Bailey, Clinton, 2018, Assessment of water resources in areas that affect the habitat of the endangered Hine's emerald dragonfly in the Lower Des Plaines River Valley, Illinois: U.S. Geological Survey Scientific Investigations Report (in press)

Arnold, T.L., Bexfield, L.M., Musgrove, MaryLynn, Stackelberg, P.E., Lindsey, B.D., Kingsbury, J.A., Kulongoski, J.T., and Belitz, Kenneth, 2018, Groundwater-quality and select quality-control data from the National Water-Quality Assessment Project, January through December 2015, and previously unpublished data from 2013 to 2014: U.S. Geological Survey Data Series 1087, in press p., <https://doi.org/10.3133/ds1087>

the related data release has been published:

Arnold, T.L., Bexfield, L.M., Musgrove, M., Lindsey, B.D., Stackelberg, P.E., Lindsey, B.D., Barlow, J.R., Kulongoski, J.T., and Belitz, K., 2018, Datasets from Groundwater-Quality and Select Quality-Control Data from the National Water-Quality Assessment Project, January through December 2015 and Previously Unpublished Data from 2013-2014, U.S. Geological Survey data release, <https://doi.org/10.5066/F7XK8DHK>.

Appendix G
State Water and Geological Survey Research Reports

- Panno, S.V., Z. Askari, W.R. Kelly, T.M. Parris and K.C. Hackley, 2018. Recharge and groundwater flow within an intracratonic basin, Midwestern U.S. *Groundwater*. 56(1):32–45. DOI: 10.1111/gwat.12545
- Dodgen, L.K., W.R. Kelly, S.V. Panno, S.J. Taylor, D.L. Armstrong, K.N. Wiles, Y. Zhang, and W. Zheng, 2017. Characterizing pharmaceutical, personal care product, and hormone contamination in a karst aquifer of southwestern Illinois, USA, using water quality and stream flow parameter. *Science of the Total Environment*. 578 (2017): 281–289. <http://www.sciencedirect.com/science/article/pii/S0048969716322859>
- Morris, L., S.D. Wilson, and W.R. Kelly, 2016. Methods of conducting effective outreach to private well owners – a literature review. *Journal of Water and Health*. 14(2):167-82. DOI: 10.2166/wh.2015.081.
- Knapp, H.V., J.R. Angel, J.R. Atkins, L. Bard, E. Getahun, K.J. Hlinka, L.L. Keefer, W.R. Kelly, and G.S. Roadcap, 2017. The 2012 Drought in Illinois. Illinois State Water Survey Report of Investigation 123, Champaign, IL, 99 p. <http://www.isws.illinois.edu/pubdoc/RI/ISWSRI-123.pdf>
- Mannix, D.H., D.B. Abrams, G.S. Roadcap, D.R. Hadley, and W.R. Kelly, 2017. Groundwater Depletion in Chicago's Southwestern Suburbs. Illinois State Water Survey Miscellaneous Publication 208, Champaign, IL, 2 p. <http://www.isws.illinois.edu/pubdoc/MP/ISWSMP-208.pdf>.
- Panno, S.V., P.G. Millhouse, R.W. Nyboer, D. Watson, W.R. Kelly, L.M. Anderson, C.C. Abert, and D.E. Luman. 2016. Guide to the Geology, Hydrogeology, History, Archaeology, and Biotic Ecology of the Driftless Area of Northwestern Illinois, Jo Daviess County. Illinois State Geological Survey Guidebook 42, Champaign, IL. <http://library.isgs.illinois.edu/Pubs/pdfs/guidebooks/guidebook-42.pdf>.
- Kelly, W.R., D. Hadley, and D. Mannix, 2016. Shallow Groundwater Sampling in Kane County, 2015. Illinois State Water Survey Contract Report 2016-04, Champaign, IL, 64 p. <http://www.isws.illinois.edu/pubdoc/CR/ISWSCR2016-04.pdf>.
- Kelly, W.R., D. Abrams, V. Knapp, S. Meyer, Z. Zhang, B. Dziegielewski, D. Hadley, G. Roadcap, D. Mannix, and Y. Lian, 2016. Water Supply Planning: Middle Illinois Progress Report. Illinois State Water Survey Contract Report CR 2016-02, Champaign, IL, 53 p. <http://www.isws.illinois.edu/pubdoc/CR/ISWSCR2016-02.pdf>.
- Brown, S.E., J.F. Thomason, J.F., K.E. Mwakanyamale, 2018, Future of science of the Mahomet Aquifer, Illinois State Geological Survey Circular 594, Champaign, IL, 36 p. <http://library.isgs.illinois.edu/Pubs/pdfs/circulars/c594.pdf>.

Stumpf, A.J. and L.A. Atkinson, 2015, Geologic cross sections across the Mahomet Bedrock Valley, Champaign, Ford, McLean, Piatt, and Vermilion Counties, Illinois: Illinois State Geological Survey, Illinois Map 19, 1:48,000,
<http://library.isgs.illinois.edu/Maps/pdfs/imap/imap19.pdf>.

Stumpf, A.J., 2018, Geologic cross sections of Quaternary deposits across the Manlove gas storage field area, Champaign County, Illinois: Illinois State Geological Survey Special Report 6, 7p., <http://library.isgs.illinois.edu/Pubs/pdfs/specialreports/sp-06.pdf>.

Carr, K.W., J.J. Miner, K.E. Bryant, J.R. Ackerman, E.T. Plankell, C.M. Long, 2016, The effects of bioswale construction on groundwater adjacent to I-294 in northern Cook County, Illinois, Illinois State Geological Survey Open File Series 2016-2c, 183 p.
<http://library.isgs.illinois.edu/Pubs/pdfs/ofs/2016/ofs2016-2c.pdf>.

Appendix H:

Rules	Illinois Implementation Status	U.S. EPA Primacy Revision Application or Program Update		U.S. EPA Status Explanation	U.S. EPA Timelines and Milestones
		Status	Date		
Phase II/V Contaminants	Implemented	Approved	9/12/1994		
Total Coliform	Implemented	Approved	6/7/1993		
Lead and Copper	Implemented	Approved	9/12/1994		
New PWS Definition	Implemented	Approved	7/29/2013		
Administrative Penalty Authority	Implemented	Approved	8/1/1998		
Consumer Confidence Report	Implemented	Extension	9/1/2007	R5 primacy backlog	R5 will add the date we received this application.
Operator Certification Program	Implemented	Approved	2/1/2001		
Interim Enhanced Surface Water Treatment	Implemented	Received	1/15/2009	R5 primacy backlog	Working to approve in FY17.
Stage 1 Disinfection Byproducts	Implemented	Received	1/15/2009	R5 primacy backlog	
Lead and Copper Minor Revisions Rule	Implemented	Received	1/15/2009	R5 primacy backlog	
Public Notice	Implemented	Received	9/28/2010	R5 primacy backlog	
Radionuclides	Implemented	Adopted	10/1/2001	R5 primacy backlog	Working to approve in FY17. R5 will add the date we received this application.
Arsenic	Implemented	Approved	7/29/2013		
Filter Backwash	Implemented	Received	1/15/2009	R5 primacy backlog	
Long Term 1 Enhanced Surface Water Treatment	Implemented	Received	1/15/2009	R5 primacy backlog	
Variance and Exemption	Implemented	Extension	9/1/2007	R5 primacy backlog	R5 will add the date we received this application.
Stage 2 Disinfection Byproducts	Implemented	Approved	3/16/2012		
Long Term 2 Enhanced Surface Water Treatment	Implemented	Approved	3/16/2012		

Groundwater Rule	Implemented	Approved	7/29/2013		
Lead and Copper Rule Short Term Revisions	Implemented	Received	10/13/2010	R5 primacy backlog	Working to approve in FY17.
Revised Total Coliform	CWS Implemented, Non-CWS Partial Implementation	Received	3/20/2014	Working to resolve issues regarding NCWS implementation in order to have an approvable package.	Working to approve in FY17/18.